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INSTALLATION RESTORATION PROGRAM PHASE II CONFIRMATION

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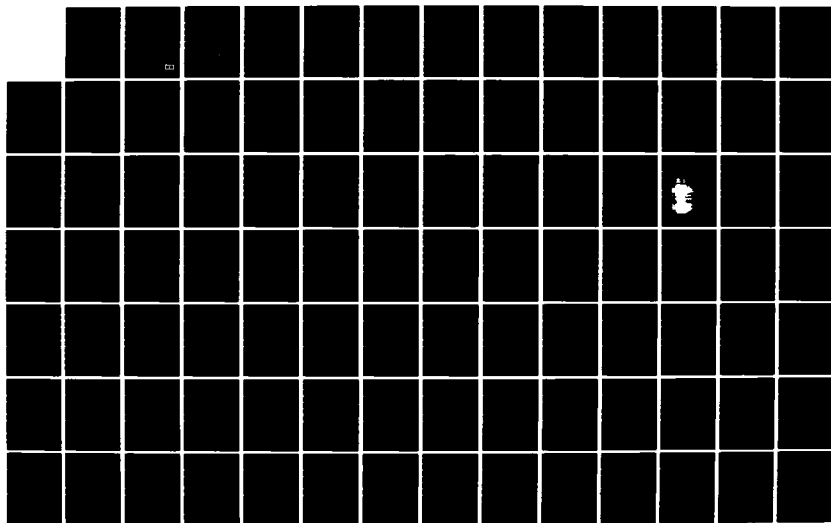
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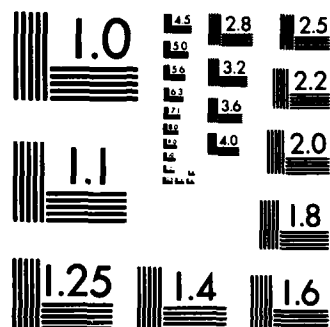
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AD-A133006

FINAL REPORT INSTALLATION RESTORATION PROGRAM

PHASE II — CONFIRMATION McCLELLAN AFB, CALIFORNIA

Contract F33615-80-D-4001

VOLUME II

PREPARED FOR

**U S AIR FORCE
OCCUPATIONAL AND ENVIRONMENTAL
HEALTH LABORATORY
BROOKS AFB, TEXAS**

JUNE 1983

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FINAL REPORT

INSTALLATION RESTORATION PROGRAM

PHASE II - CONFIRMATION

McCLELLAN AFB, CALIFORNIA

VOLUME II

Prepared for

**US AIR FORCE
OCCUPATIONAL AND ENVIRONMENTAL HEALTH LABORATORY
BROOKS AFB, TEXAS**

June 1983

Prepared by

**Engineering-Science
125 West Huntington Drive**

Partial

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APPENDIX H

**SAMPLING EVENTS FOR
STAGE I AND STAGE II MONITORING WELLS**

SAMPLING EVENTS
STAGE I MONITORING WELLS

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 16S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/16/82	97.7	Pump ran for 7 minutes until well ran dry (9:05 - 9:12). At 1:30, there were only two feet of water in the well. Bailer was used to sample. Bailer was rinsed in acetone and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (half full for GC/MS) 1 VOA bottle
8/17/82	100.0	Not enough water was initially in well for pumping. Ten bailer volumes (approximately 3 gallons) were removed prior to sampling. Samples were obtained using double sampler technique. Water samples appeared turbid. Both the bailer and samplers were rinsed with acetone and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)
10/8/82	100.29	Not enough water was initially in well for pumping. Using the bailer (1200-ml), ten bailer volumes were removed prior to sampling. Samples were obtained using the glass/Teflon sampler prerinsed with acetone and DI water. One sampler volume was collected and extruded before actual sample was obtained.	3 VOA bottles (TCE only)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 17S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/15/82	94.0	Pump ran for 2 minutes at 3 gpm. About one casing volume was pumped out; well ran dry.	_____
6/16/82	94.1	Pumped for 6 minutes before sampling from Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/17/82	96.2	Not enough water was initially in well for pumping. Ten bailer volumes (approximately 3 gallons) removed prior to sampling (about one casing volume). Samples were obtained using double sampler technique. Water samples appeared turbid. Both the bailer and samplers were rinsed with acetone and DI water.	1 gallon bottle (pest/herb/PCB's) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 18S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/15/82	90.7	Pump ran for 15 minutes, stopped for 5 minutes; ran again for 10 minutes before sampling from Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/16/82	92.9	Not enough water was initially in well for pumping. Ten bailer volumes (approximately 3 gallons) were removed prior to sampling (less than one casing volume). Samples were obtained using the glass/Teflon sampler. Water samples were slightly turbid. Both the bailer and sampler were rinsed with acetone and DI water.	1 gallon bottle (pest/herb/PCB's) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 19S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	79.8	There were about 2 feet of water in the well. Samples were taken with bailer. Bailer rinsed with acetone and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/16/82	81.3	Not enough water was initially in well for pumping. Ten bailer volumes (approximately 3 gallons) were removed prior to sampling (less than one casing volume). Samples were obtained using the glass/Teflon sampler. Water samples appeared slightly turbid. Both the bailer and sampler were rinsed with acetone and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 20S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	80.3	Well was silty. Bailer was used to sample water for VOA bottle and part of GC/MS bottle.	1 gallon bottle (part full for GC/MS) 1 VOA bottle
5/25/82	83.5	Well was redeveloped and sampled with bailer since previous sample was insufficient. Hydrocarbons were on top of water surface, about 1/2 inch in thickness. The VOA sample broke. Bailer rinsed with Freon and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
6/8/82	84.0	Resampled VOA bottle with bailer. Hydrocarbons still present. Bailer rinsed with Freon and DI water.	1 VOA bottle
8/11/82	84.4	Strong hydrocarbon odor present. Ten bailer volumes (approximately 3 gallons) were removed prior to sampling. Water in well was initially clear with hydrocarbon layer on surface. Water became silty during bailing. Samples were obtained using the glass/Teflon sampler. Both the bailer and sampler were rinsed with Freon, acetone, and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide) 1 quart bottle (aliphatics)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 218

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/15/82	78.3	Pump did not work. Bailed out about 1-1/2 gallons before sampling. Sampled with bailer. Bailer rinsed with acetone and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (half full for GC/MS) 1 VOA bottle
8/13/82	79.3	Not enough water was initially in well for pumping. Ten bailer volumes (approximately 3 gallons) were removed prior to sampling (less than one casing volume). Samples were obtained using the glass/Teflon sampler. Both the bailer and sampler were rinsed with acetone and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 22S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/4/82	84.9	Sampled with bailer; about 1-1/2 gallon well water was removed before sampling. The VOA sample was broken. Bailer rinsed with acetone and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
6/18/82	85.9	About 1 gallon of well water removed. Resampled with bailer. Bailer rinsed with acetone and DI water.	1 VOA bottle
8/13/82	86.8	Not enough water was initially in well for pumping. Five bailer volumes (approximately 1-1/2 gallons) were removed from well until bailer stopped working. Samples were obtained using glass/Teflon sampler. Water samples appeared slightly turbid. Both the bailer and sampler were rinsed with acetone and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottles (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 238

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	84.2	Water was silty at bottom of well; pump did not work. Bailer was used to bail about 1-1/2 gallons of well water. Samples were taken with bailer. Bailer rinsed with acetone and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/13/82	90.1	Not enough water was initially in well for pumping. On 8/12/82, ten bailer volumes (approximately 3 gallons) were removed, but the well was not sampled. On 8/13/82, five additional bailer volumes were removed (approximately 1-1/2 gallons) prior to sampling. Together, about 1-1/2 casing volumes were removed. Samples were taken with the glass/Teflon sampler; sample water was turbid. Both the bailer and sampler were rinsed with acetone and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 24S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	85.2	Pump ran for 2 minutes and stopped. Samples were taken with bailer. Bailer rinsed with acetone and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/12/82	89.8	Not enough water was initially in well for pumping. Ten bailer volumes (approximately 3 gallons) were removed prior to sampling (less than one casing volume). Samples were obtained using the glass/Teflon sampler. Sampled water was turbid. Both the bailer and sampler were rinsed with acetone and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 25S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/15/82	94.7	Pump ran for 2 minutes, stopped for 5 minutes, ran again for 3 minutes and stopped for 5 minutes. Samples were taken from the Teflon tubing. One-half gallon of the GC/MS sample was taken with the bailer. Bailer rinsed with acetone and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/12/82	96.4	Not enough water was initially in well for pumping. Ten bailer volumes (approximately 3 gallons) were removed prior to sampling (less than one casing volume). Samples were obtained using the glass/Teflon sampler. Sampled water was turbid. Both the bailer and sampler were rinsed with acetone and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 268

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	95.7	Water was very silty. The plastic bailer was used to remove 3 gallons of well water. Sample was taken with bailer. Bailer rinsed with acetone and DI water.	1 VOA bottle
4/29/82	95.2	Bailer was used for sampling. Well was silty. Bailer rinsed with acetone and DI water.	1 gallon bottle (GC/MS)
6/16/82	96.5	Well had to be resampled for pesticides/herbicides as the well was too silty in April. It was redeveloped. Bailer was used for sampling. Bailer rinsed with acetone and DI water.	1 gallon bottle (pest/herb/metals)
8/11/82	97.5	Not enough water was initially in well for pumping (<10 feet); the pump was tried but failed to remove water. Ten bailer volumes (approximately 3 gallons) were removed prior to sampling; the well was bailed almost dry. Samples were obtained using the glass/Teflon sampler. Both the bailer and sampler were rinsed with acetone and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide) 1 quart glass bottle (creylic acid)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 27S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	85.6	Water was very silty and pump did not work. The bailer was used to remove 3 gallons of well water before sampling. Bailer was used for sampling. Bailer rinsed with acetone and DI water.	1 gallon bottle (GC/MS) 1 VOA bottle
6/16/82	95.1	Well was redeveloped. Pump ran for 3 minutes, stopped for 22 minutes, ran again for 2 minutes. Sample taken from Teflon tubing.	1 gallon bottle (pest/herb/metals)
8/12/82	96.0	Not enough water was initially in well for pumping. Ten bailer volumes (approximately 3 gallons) were removed prior to sampling (less than one casing volume). Samples were obtained using the glass/Teflon sampler. Sampled water was turbid. Both the bailer and sampler were rinsed with acetone and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 285

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/16/82	70.2	Pump did not work. Bailer was used for sampling. Bailer rinsed with acetone and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (half full for GC/MS) 1 VOA bottle
8/17/82	---	Well was completely dry.	None

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 298

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	88.8	Bailer was used for sampling. Bailer rinsed with acetone and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/16/82	91.9	Not enough water initially in well for pumping. One bailer volume (approximately 1,200 mls) was removed prior to sampling. Less than 1 foot of water was in the well. Samples were obtained using the glass/Teflon sampler. Water sample was very silty and sandy. Both the bailer and sampler were rinsed with acetone and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 30

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/16/82	94.9	Bailer was used for sampling, after about 2 gallons of well water were removed. Bailer rinsed with acetone and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (half full for GC/MS) 1 VOA bottle
8/17/82	97.1	Not enough water was initially in well for pumping. Ten bailer volumes (approximately 3 gallons) were removed prior to sampling (less than one casing volume). Samples were obtained using the glass/Teflon sampler. Sampled water initially clear, but became turbid while bailing. Both the bailer and sampler were rinsed with acetone and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 31

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/15/82	89.2	Pump ran for 10 minutes. Samples taken from Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/17/82	90.3	Pump ran for 3 minutes until well went dry at 2.2 gpm. About 7 gallons were removed from well during pumping, slightly less than one casing volume. Samples were obtained using double sampler technique. Water samples appeared clear. The samplers were rinsed with acetone and DI water.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 16D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/16/82	99.8	Pump ran for 30 minutes. Samples were taken from the Teflon tubing discharge.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/17/82	102.1	Continuous pumping for 30 minutes at 2.2 gpm. In excess of 3 casing volumes were pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethyl- ene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 17D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/15/82	94.3	Continuous pumping for 40 minutes at 2.5 gpm. Samples were taken from Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/17/82	96.5	Continuous pumping for 35 minutes at >2.2 gpm. In excess of 3 casing volumes were pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear.	1 gallon bottle (pest/herb/PCB's) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 18D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/15/82	91.3	Pump ran for 10 minutes, stopped for 2 minutes; ran for 21 minutes and stopped for 12 minutes; ran again for 20 minutes. Samples were taken from Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/16/82	94.0	Continuous pumping for 55 min- utes at 2.2 gpm. In excess of 3 casing volumes were pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 19D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	79.8	Well was pumped for 30 minutes Samples were taken from Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/16/82	82.4	Continuous pumping for 70 min- utes at 2.2 gpm. In excess of 3 casing volumes were pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 20D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	83.1	Pump ran for 30 minutes. Samples were taken from Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/11/82	86.0	Continuous pumping for 93 minutes at 2.2 gpm. In excess of 3 casing volumes were pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear and had no apparent odor (i.e., aliphatics).	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 1 quart polyethylene bottle (cyanide) 1 quart bottle (aliphatics)
9/4/82	86.06	Sampled well directly with glass/Teflon sampler without prior bailing. Sample collected at 11:30 a.m.	1 liter bottle (aliphatics)
9/4/82	86.06	Continuous pumping for 165 minutes at 2.5 gpm. Samples were taken from Teflon tubing. Pumped water was clear. Sample collected at 2:45 p.m.	1 liter bottle (aliphatics)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 21D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/15/82	78.6	The well was pumped for 40 minutes. Samples were taken from the Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/13/82	80.0	Continuous pumping for 50 minutes at 2.2 gpm. In excess of 3 casing volumes were pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 22D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	84.1	Pump ran for 30 minutes. Samples taken from Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/13/82	87.1	Continuous pumping for 75 min- utes at 2.2 gpm. In excess of 3 casing volumes were pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 23D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	85.7	Well was pumped for 30 minutes and samples were taken from the Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/13/82	92.1	Continuous pumping for 70 minutes at 2.2 gpm. In excess of 3 casing volumes were pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 24D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	85.5	Pump ran for 30 minutes before samples were taken from Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/12/82	92.7	Continuous pumping for 60 minutes at 2.2 gpm. Three casing volumes were pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 25D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/15/82	94.9	Pump ran for 50 minutes. Samples were taken from the Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/12/82	96.8	Continuous pumping for 40 minutes at 2.2 gpm. In excess of three casing volumes were pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 26D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	95.8	Well was pumped for 30 minutes and sampled from the Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/11/82	103.8	Continuous pumping for 53 minutes at 2.2 gpm until generator ran out of gas. Pumped again for 15 additional minutes at 2.2 gpm. In excess of 3 casing volumes pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide) 1 quart glass bottle (cresylic acid)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 27D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	94.7	Pump ran for 30 minutes. Sample was collected with bailer. Bailer rinsed with acetone and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/12/82	103.1	Continuous pumping for 45 minutes at 2.2 gpm. In excess of 3 cas- ing volumes were pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 28D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
6/16/82	98.7	Pump ran for 5 minutes. No more water was pumped out. The bailer was used for sampling. Bailer rinsed with acetone and DI water.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (half full for GC/MS) 1 VOA bottle
8/17/82	98.5	Continuous pumping for 30 minutes. Pump flow rate varied from 1 to 2.2 gpm. About three casing volumes were removed from well before sampling. Samples were taken from Teflon tubing. Pumped water varied from clear to slightly turbid.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 29D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
4/28/82	88.6	Pump ran for 30 minutes. Samples were taken from Teflon tubing.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 1 VOA bottle
8/16/82	93.5	Continuous pumping for 60 minutes at 2.2 gpm. In excess of three casing volumes were pumped from well before sampling. Samples were taken from Teflon tubing. Pumped water was clear.	1 gallon bottle (pest/herb) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

SAMPLING EVENTS
STAGE II MONITORING WELLS

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 338

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/29/62	83.52	Pump ran for 2 minutes at 2.5 gpm before well went dry. Less than one casing volume removed prior to sampling with double sampler. Pumped water was silty.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyth- ylene bottle (cyanide) 1 quart bottle (aliphatics)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 34S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/14/82	---	Well was dry with thick mud at the bottom.	None
9/28/82	---	Well contained insufficient water for sampling.	None

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 35S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/14/82	---	Well was dry with muddy silt at the bottom.	None

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 36S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/29/82	80.33	Well contained insufficient water for pumping or bailing. Samples obtained with double sampler. Sampled water was silty. Very muddy at bottom of well.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 37S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/28/82	83.58	Well contained insufficient water for pumping. Samples collected using double sampler technique. Sampled water was relatively clear.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 39S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/14/82	87.52	Very little water in well (approximately 1 foot). Well bailed 5 times prior to sampling. Samples obtained with sampler. Sampled water was brown and silty. Sample for GC/MS was obtained 9/15/82.	1 liter in gallon bottle (GC/MS) 2 VOA bottles 1 liter polyeth- ylene bottle (half full for cyanide)
9/27/82	---	Well was dry.	None

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 40S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/29/82	97.06	Well contained insufficient water for pumping. Bailed 5 times prior to sampling. Sampled with double sampler (glass/Teflon and Teflon). Effluent appeared somewhat turbid but fairly clean.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide) 1 quart glass bottle (cresylic acid)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 41S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/14/82	95.52	Pumped for 33 minutes total, with flow rate of 2.0 gpm for 3.5 minutes, decreasing to 1.1 gpm thereafter. In excess of 3 casing volumes were removed prior to sampling. Pumped water was silty.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 liter polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 42S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/15/82	---	Well was dry with 6 inches of mud at the bottom. Required further development.	None
9/27/82	89.73	Samples obtained using double sampler technique without prior bailing. Water appeared brown and cloudy.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 43S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/14/82	87.81	Pump ran for 2 minutes at 2.3 gpm, then well pumped dry. Pump effluent was clear. Samples obtained with double sampler after well went dry. Sample water was a muddy color. One sampler volume was emptied prior to sampling.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 liter polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 44S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/13/82	78.375	Pumped for 101 minutes at 1.5 gpm initially, decreasing to <0.5 gpm. Twenty-five gallons pumped from well before sampling. Samples collected using pump. Pumped water was murky and silty.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 liter polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 458

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/14/82	87.56	Less than 2 gallons were removed with bailer prior to sampling. Only 1.5 to 2 feet of water stood in well. Samples were collected with Teflon sampler. The sampled water was muddy.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 liter polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 468

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/29/82	96.7	Well contained insufficient water for pumping. Bailed 5 times prior to sampling with glass sampler. Sampled water appeared turbid and very silty.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 47S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/29/82	83.98	Well contained insufficient water for either pumping or bailing. Sampled directly with glass/Teflon sampler. Sampled water was very muddy.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyeth- ylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 48S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/15/82	---	Well was dry, and did not appear to be completed.	None

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 496

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/29/82	100.04	Well pumped dry in 17 minutes at initial flow rate of 1.4 gpm, increasing to 2-3 gpm. Well was allowed to recharge for 20 minutes, then was pumped dry again in 8 minutes. Samples obtained by pumping directly into sample bottles. Pumped water was initially clear but became murky.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 50S

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/14/82	---	Well was dry.	None

ES WELLS SAMPLING RECORD
McClellan AFB, California

WELL NO. 38D

Date	Water Level (feet)	Sampling Procedure	Samples Taken
9/27/82	80.21	Pumped 10 minutes at 2.4 gpm and well subsequently went dry. Allowed well to recharge for about 20 minutes and pumped again. Pump ran for 45 seconds before well pumped dry again. Pumped water was clear. Samples collected with double sampler. Sampled water was silty.	1 gallon bottle (pest/herb/metals) 1 gallon bottle (GC/MS) 2 VOA bottles 1 quart polyethylene bottle (cyanide)

APPENDIX I

WATER LEVEL DATA
MONITORING WELLS

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]**LOCATION**

PROJECT:

WELL or DATE MW 8

WATER LEVEL DATA

WELL LOCATION McKellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 77.45 msl

[illegible]

2-59

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

PROJECT

WELL or DATE AW 10

WATER LEVEL DATA

WELL LOCATION McCalla

MEASURING POINT ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 56.17 msl

[illegible]

LOCATION:

PROJECT:

WELL or DATE MD 11

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 53.38 msl

[illegible]**LOCATION**

PROJECT .

WELL or DATE HW 12

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 59.79 msl

[illegible]

LOCATION

PROJECT

WELL or DATE 11/19

WATER LEVEL DATA

WELL LOCATION McAlester

MEASURING POINT maind list

ELEVATION: MEASURING POINT

GROUND LEVEL 58.81 msl

[illegible]

LOCATION:

PROJECT

WELL or DATE 4W 15

WATER LEVEL DATA

WELL LOCATION McWilliams

MEASURING POINT Gravel level

ELEVATION: MEASURING POINT _____

GROUND LEVEL 56.61 MSL

[illegible]**LOCATION**

PROJECT

WELL or DATE MW 165

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 80.7' wsl

[illegible]

LOCATION

PROJECT

WELL or DATE MW17S

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT.

GROUND LEVEL 73.3' msl

[illegible]

2-68

WELL or DATE MW 18 S

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 69.2 msl

[illegible]

2-69

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]**LOCATION**

PROJECT

WELL or DATE MD 205

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 60.1 msl

[illegible]

2-71

WELL or DATE MW 215

WATER LEVEL DATA

WELL LOCATION McCellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT _____

GROUND LEVEL 57.5 msl

[illegible]

LOCATION:

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

McClellan

MEASURING POINT

Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL

60.0 ms!

[illegible]

LOCATION:

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

2-74

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]**LOCATION**

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

LOCATION:

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]**LOCATION**

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

LOCATION

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION M. C. C. C. C.

MEASURING POINT Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 68.5 MSL

[illegible]

2-80

WELL or DATE MW30S

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT _____

GROUND LEVEL 73.0 msl

[illegible]**LOCATION**

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

LOCATION

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

LOCATION:

PROJECT :

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]**LOCATION**

PROJECT

WELL or DATE MW 375

WATER LEVEL DATA

WELL LOCATION McAllen

MEASURING POINT Ground level

ELEVATION: MEASURING POINT _____

GROUND LEVEL 60.07

[illegible]

LOCATION:

PROJECT

WELL or DATE MW395

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT _____

GROUND LEVEL 67.96 msl

[illegible]**LOCATION**

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT.

GROUND LEVEL

[illegible]

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]**LOCATION**

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

LOCATION:

PROJECT

WELL or DATE MW 435

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT _____

GROUND LEVEL 57.01 msl

[illegible]

LOCATION:

PROJECT

WELL or DATE MW 455

WATER LEVEL DATA

WELL LOCATION McCellan

MEASURING POINT. Ground level

ELEVATION: MEASURING POINT _____

GROUND LEVEL 60.64

[illegible]**LOCATION**

PROJECT

WELL or DATE MW 765

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 65.67 msl

[illegible]**LOCATION**

PROJECT

AD-A133 006

INSTALLATION RESTORATION PROGRAM PHASE II CONFIRMATION

2/8

MCCLELLAN AFB CALIFORNIA VOLUME 2(U)

ENGINEERING-SCIENCE INC ARCADIA CALIF

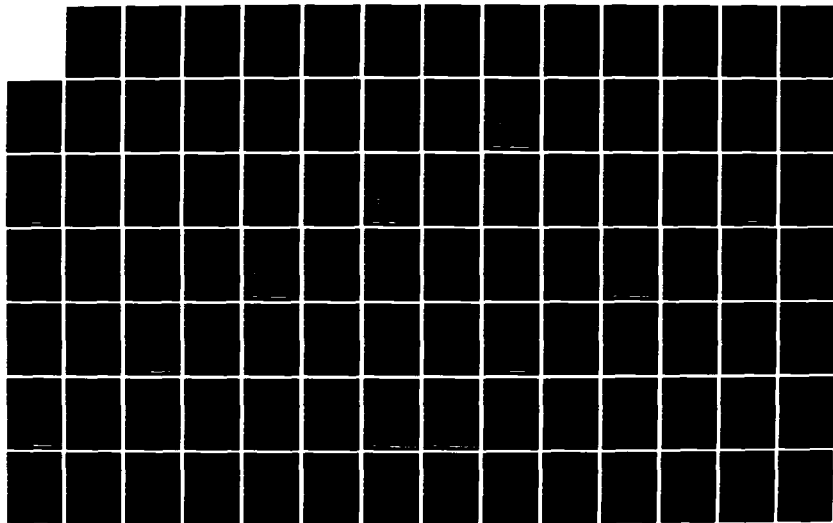
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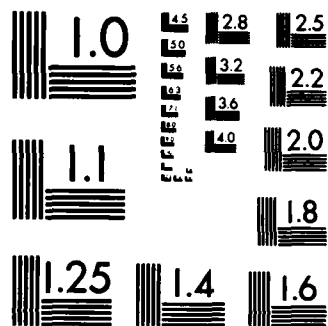
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F/G 13/2

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

WELL or DATE MW48S

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT _____

GROUND LEVEL 54.23 ms/

[illegible]

2-97

WELL or DATE MN495

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT _____

GROUND LEVEL 74.90

[illegible]**LOCATION**

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

2-99

WELL or DATE MW 16 D

WATER LEVEL DATA

WELL LOCATION Mr. Clellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 80.7' msl

[illegible]**LOCATION**

PROJECT

WELL or DATE MW! / 5

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 73.3' msl

[illegible]**LOCATION**

PROJECT

WELL or DATE MW 18D

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 69.2 msl

[illegible]**LOCATION**

PROJECT

WELL or DATE MW 19.D

WATER LEVEL DATA

WELL LOCATION McClellan

MEASURING POINT Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL 57.8 msl

[illegible]

LOCATION:

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

LOCATION:

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]**LOCATION**

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

LOCATION

PROJECT

WELL or DATE

WATER LEVEL DATA

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MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

LOCATION

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

LOCATION:

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

McClain

MEASURING POINT

Ground level

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

2-109

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]**LOCATION**

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]**LOCATION**

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL-LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

2-112

WELL or DATE

WATER LEVEL DATA

WELL LOCATION M. Clellan

MEASURING POINT Gravel Inlet

ELEVATION: MEASURING POINT

GROUND LEVEL 63.5 MSL

[illegible]

LOCATION:

PROJECT

WELL or DATE

WATER LEVEL DATA

WELL LOCATION

MEASURING POINT

ELEVATION: MEASURING POINT

GROUND LEVEL

[illegible]

2-114

APPENDIX J
ANALYTICAL DATA
BASE PRODUCTION WELLS

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14087-1

CLIENT I.D. BW1

29 January 1982
Sample

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	24
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	23
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	1500
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

2-116

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

29 January 1982

CLIENT Engineering Science

CAL LAB NO. 14C5.7-1

CLIENT I.D. BW1

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluorenone	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

AROCOR (PCB) REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820124

BW #1

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

Aroclor 1016

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

Aroclor 1260

No identifiable Aroclor peaks ✓

HERBICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820124

BW #1

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

2,4,D

0.001

0.04

2,4,5,T

0.001

<0.001

2,4,5 TP (Silver)

0.002

DBCP (Dibromochloro propane)

No identifiable herbicide peaks _____

PESTICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID Mc Clellan AFB

ES ID 820124

BW #1

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	<0.002
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	<0.002
Chlordane	0.04	
DOD (TDE)	0.012	<0.01
DOE	0.006	
DOT	0.016	<0.02
Dieldrin	0.006	
Endosulfan I	0.005	<0.03
Endosulfan II	0.01	
Endosulfan sulfate	0.03	<0.03
Endrin	0.009	<0.009
Heptachlor	0.002	<0.002
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	

No identifiable pesticide peaks _____

METALS REPORT FORM

Sample ID McClellan AFBES ID 820124BW #1

Aliquot analyzed _____

Date Received 5 February 1992

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/kg</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1 } total	0.055	
Chromium (+6)	c	—			
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.001	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.028	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

11/2/82 sample

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9602

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering ScienceCAL LAB NO. 14087-2CLIENT I.D. 3W 2

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	*
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
✓ 29V	1,1-dichloroethylene	175
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	10
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

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California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14087-2

CLIENT I.D. 1302

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	ug/L
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

1/11
AROCOR (PCB) REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820125

BW #2

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

Aroclor 1016

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

Aroclor 1260

No identifiable Aroclor peaks ✓

HERBICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820125

BW #2

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

2,4,D

0.001

0.04

2,4,5,T

0.001

0.18

2,4,5 TR (Silvex)

0.002

DBCP (Dibromochloro propane)

No identifiable herbicide peaks _____

PESTICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820125

RW#2

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	0.12
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.06
Chlordane	0.04	
DDD (TDE)	0.012	<0.01
DDE	0.006	
DDT	0.016	<0.02
Dieldrin	0.006	
Endosulfan I	0.005	0.03
Endosulfan II	0.01	
Endosulfan sulfate	0.03	0.17
Endrin	0.009	<0.009
Heptachlor	0.002	0.05
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	

No identifiable pesticide peaks _____

METALS REPORT FORM

Sample ID McStellan AEBES ID 720125BW #2

Aliquot analyzed _____

Date Received 5 February 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.001	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

1/12/82 sample

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering ScienceCAL LAB NO. 14087-3CLIENT I.D. BW 8

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14087-3

CLIENT I.D. BLOS

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
15 acenaphthene	nd
58 benzidine	nd
88 1,2,4-trichlorobenzene	nd
98 hexachlorobenzene	nd
128 hexachloroethane	nd
188 bis(2-chloroethyl)ether	nd
208 2-chloronaphthalene	nd
258 1,2-dichlorobenzene	nd
268 1,3-dichlorobenzene	nd
278 1,4-dichlorobenzene	nd
288 3,3'-dichlorobenzidine	nd
358 2,4-dinitrotoluene	nd
368 2,6-dinitrotoluene	nd
378 1,2-diphenylhydrazine (as azobenzene)	nd
398 fluoranthene	nd
408 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
418 4-bromophenyl phenyl ether	nd
428 bis(2-chloroisopropyl)ether	nd
438 bis(2-chloroethoxy)methane	nd
528 hexachlorobutadiene	nd
538 hexachlorocyclopentadiene	nd
548 isophorone	nd
558 naphthalene	nd
568 nitrobenzene	nd
618 N-nitrosodimethylamine	nd
628 N-nitrosodiphenylamine	nd
638 N-nitrosodi-n-propylamine	nd
668 bis(2-ethylhexyl)phthalate	nd
678 butyl benzyl phthalate	nd
688 di-n-butyl phthalate	nd
698 di-n-octyl phthalate	nd
708 diethyl phthalate	nd
718 dimethyl phthalate	nd
728 benzo(a)anthracene	nd
738 benzo(a)pyrene	nd
748 3,4-benzofluoranthene	nd
758 benzo(k)fluoranthene	nd
768 chrysene	nd
778 acenaphthylene	nd
788 anthracene	nd
798 benzo(ghi)perylene	nd
808 fluorene	nd
818 phenanthrene	nd
828 dibenzo(a,h)anthracene	nd
838 indeno(1,2,3-cd)pyrene	nd
848 pyrene	nd

1/11
AROCLOR (PCB) REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB ES ID 820126
BW 8 Aliquot analyzed _____
Date Received 5 Feb 82 Detector Used: Coulson, EC, Flame, PID
Date analyzed _____ Chemist _____ Approved _____
Detection Limits (ppb) Found (ppb)
Aroclor 1016 _____
Aroclor 1221 _____
Aroclor 1232 _____
Aroclor 1242 _____
Aroclor 1248 _____
Aroclor 1254 _____
Aroclor 1260 _____

7
No identifiable Aroclor peaks ✓

HERBICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB ES ID 820126
BW 8 Aliquot analyzed _____
Date Received 5 Feb 82 Detector Used: Coulson, EC, Flame, PID
Date analyzed _____ Chemist _____ Approved _____
Detection Limits (ppb) Found (ppb)
2,4,D 0.001 0.06
2,4,5,T 0.001 0.01
2,4,5 TP (Silvex) 0.002
DECP (Dibromochloro propane)

No identifiable herbicide peaks _____

PESTICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820126

BW #2

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	0.26
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	<0.002
Chlordane	0.04	
DOD (TDE)	0.012	<0.01
DDE	0.006	
DDT	0.016	<0.02
Dieldrin	0.006	
Endosulfan I	0.005	<0.005
Endosulfan II	0.01	
Endosulfan sulfate	0.03	<0.03
Endrin	0.009	<0.009
Heptachlor	0.002	<0.002
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	

No identifiable pesticide peaks _____

METALS REPORT FORM

Sample ID McNellion AFBES ID 820126BW # 8

Aliquot analyzed _____

Date Received 5 February 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.001	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

1/12/82 *nm/plw*

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9602

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering ScienceCAL LAB NO. 14087-4CLIENT I.D. BW 11

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

2-134

11/2/82 sample

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14087-4

CLIENT I.D. BW 11

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
88 1,2,4-trichlorobenzene	nd
98 hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

11
AROCOR (PCB) REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID Mc Clellan AFB

ES ID 820127

BW #11

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

Aroclor 1016

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

Aroclor 1260

No identifiable Aroclor peaks ☒

HERBICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID Mc Clellan AFB

ES ID 820127

BW #11

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

2,4,D

0.001

0.02

2,4,5,T

0.001

0.004

2,4,5 TP (Silvex)

0.002

DBCP (Dibromochloro propane)

No identifiable herbicide peaks _____

PESTICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID Mc Clellan AFB

ES ID 820127

BW #11

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	<0.002
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.08
Chlordane	0.04	
DDD (TDE)	0.012	0.07
DDE	0.006	
DDT	0.016	<0.02
Dieldrin	0.006	
Endosulfan I	0.005	0.09
Endosulfan II	0.01	
Endosulfan sulfate	0.03	<0.03
Endrin	0.009	<0.009
Heptachlor	0.002	<0.002
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	

No identifiable pesticide peaks _____

METALS REPORT FORM

Sample ID McMellon AFBES ID 820127BW # 11

Aliquot analyzed _____

Date Received 5 February 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.001	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.097	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

11/2/82 sample

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering ScienceCAL LAB NO. 14087-5CLIENT I.D. BW 12

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

2-140

11/2/82 sample

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14087-5

CLIENT I.D. BW 12

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

2-141

1/11
AROCLOR (PCB) REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820128

BW #12

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

Aroclor 1016

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

<0.08

Aroclor 1260

No identifiable Aroclor peaks _____

HERBICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820128

BW #12

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

2,4,D

0.001

0.03

2,4,5,T

0.001

0.05

2,4,5 TP (Silvex)

0.002

DBCP (Dibromochloro propane)

No identifiable herbicide peaks _____

PESTICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820122

BW #12

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	0.003
Beta BHC	0.004	<0.004
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	<0.005
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	<0.002
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	

No identifiable pesticide peaks _____

METALS REPORT FORM

Sample ID McClellan AFBES ID 820128BW # 12

Aliquot analyzed _____

Date Received 5 February 1972

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>into 1/2</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.001	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

64/18

8/27/82

2-145

1/12/82 sample

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering ScienceCAL LAB NO. 14087-6CLIENT I.D. RW 13

VOLATILES		ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

1/12/82 psm-plu

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 17687-6

CLIENT I.D. BLU-13

<u>ACID COMPOUNDS</u>	<u>ug/L</u>
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	na
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	na
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	*

<u>BASE/NEUTRAL COMPOUNDS</u>	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

<u>BASE/NEUTRAL COMPOUNDS</u>	<u>ug/L</u>
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

AROCLOR (PCB) REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820129

BW #13

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

Aroclor 1016

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

<0.08

Aroclor 1260

No identifiable Aroclor peaks _____

HERBICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820129

BW #13

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

2,4,D

0.001

0.006

2,4,5,T

0.001

0.006

2,4,5 TP (Silvex)

0.002

DBCP (Dibromochloro propane)

No identifiable herbicide peaks _____

PESTICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820129

BW #13

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	0.004
Beta BHC	0.004	<0.004
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	<0.005
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	<0.002
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	

No identifiable pesticide peaks

METALS REPORT FORM

Sample ID McClellan AFBES ID 820189BW #13

Aliquot analyzed _____

Date Received 5 February 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/l</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	---	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	---		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	---	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	---		
Magnesium		1	---		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	---	0.5	<0.001	
Molybdenum	c	500	---		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	---		
Selenium	p,h,c,d	---	10	<0.01	
Silicon		10	---		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

11/2/82 sample

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9602

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering ScienceCAL LAB NO. 14087-7CLIENT I.D. 3W 17

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

1/12/82 *ppm*

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14057-7

CLIENT I.D. BW 17

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

AROCLOR (PCB) REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820130

BW #17

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

Aroclor 1016

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

<0.08

Aroclor 1260

No identifiable Aroclor peaks _____

HERBICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820130

BW #17

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

2,4,D

0.001

<0.001

2,4,5,T

0.001

<0.001

2,4,5 TE (Silvex)

0.002

DBCP (Dibromochloro propane)

No identifiable herbicide peaks _____

PESTICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820/30

BW #17

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	<0.002
Beta BHC	0.004	<0.004
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	0.27
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	0.04
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	

No identifiable pesticide peaks _____

METALS REPORT FORM

Sample ID McClellan AFBES ID 820130BW # 17

Aliquot analyzed _____

Date Received 5 February 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.001	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

11/2/82 sample

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering ScienceCAL LAB NO. 14087-8CLIENT I.D. BW 18

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14087-8

CLIENT I.D. BW-18

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

AROCOR (PCB) REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID Mc Clellan AFB

ES ID 820131

BW #18

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

Aroclor 1016

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

<0.08

Aroclor 1260

No identifiable Aroclor peaks _____

HERBICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID Mc Clellan AFB

ES ID 820131

BW #18

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

2,4,D

0.001

<0.001

2,4,5,T

0.001

0.003

2,4,5-TP (Silvex)

0.002

DBCP (Dibromochloro propane)

No identifiable herbicide peaks _____

PESTICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820131

BW #18

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	<0.002
Beta BHC	0.004	0.10
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	<0.005
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	<0.002
Methoxychlor	0.02	
Toxaphene	0.40	

No identifiable pesticide peaks

METALS REPORT FORM

Sample ID McClellan AFBES ID 820131BW # 18

Aliquot analyzed _____

Date Received 5 February 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	---	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	---		
Chromium (+3)	p,h,c,d,o	20	1	total <0.05	
Chromium (+6)	c	---	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	---		
Magnesium		1	---		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	---	0.5	<0.001	
Molybdenum	c	500	---		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	---		
Selenium	p,h,c,d	---	10	<0.01	
Silicon		10	---		

64/18

8/27/82

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Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

64/18

8/27/82

2-163

11/4/82 sample

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14087-9

CLIENT I.D. BW 28

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

2-164

11/2/22 sample

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95811
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14687-9

CLIENT I.D. BLW-28

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
18 acenaphthene	nd
58 benzidine	nd
88 1,2,4-trichlorobenzene	nd
98 hexachlorobenzene	nd
128 hexachloroethane	nd
188 bis(2-chloroethyl)ether	nd
208 2-chloronaphthalene	nd
258 1,2-dichlorobenzene	nd
268 1,3-dichlorobenzene	nd
278 1,4-dichlorobenzene	nd
288 3,3'-dichlorobenzidine	nd
358 2,4-dinitrotoluene	nd
368 2,6-dinitrotoluene	nd
378 1,2-diphenylhydrazine (as azobenzene)	nd
398 fluoranthene	nd
408 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

AROCLOR (PCB) REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820132

BW #28

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

Aroclor 1016

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

0.24

Aroclor 1260

No identifiable-Aroclor peaks _____

HERBICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820132

BW #28

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

2,4,D

0.001

0.002

2,4,5,T

0.001

0.002

2,4,5 TP (Silvex)

0.002

DBCP (Dibromochloro propane)

No identifiable herbicide peaks _____

PESTICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McKellan AFB

ES ID 820132

BW #28

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	

No identifiable pesticide peaks _____

METALS REPORT FORM

Sample ID McClellan AFBES ID 820132HW #28

Aliquot analyzed _____

Date Received 5 February 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	---	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	---		
Chromium (+3)	p,h,c,d,o	20	1	total <0.05	
Chromium (+6)	c	---	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	---		
Magnesium		1	---		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	---	0.5	<0.001	
Molybdenum	c	500	---		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	---		
Selenium	p,h,c,d	---	10	<0.01	
Silicon		10	---		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.048	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

64/18

8/27/82

2-169

1/12/82 sample

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering ScienceCAL LAB NO. 14087-10CLIENT I.D. 3W 29

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

2-170

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14687-10

CLIENT I.D. BLW 29

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 176.8.7-11D
CLIENT I.D. Blk 29 - Duplicate

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
50A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	ug/L
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

AROCLOR (PCB) REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820133

BW #29

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

Aroclor 1016

Aroclor 1221

Aroclor 1232

Aroclor 1242

Aroclor 1248

Aroclor 1254

<0.02

Aroclor 1260

No identifiable Aroclor peaks _____

HERBICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McClellan AFB

ES ID 820133

BW #29

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

Detection Limits (ppb)

Found (ppb)

2,4,D

0.001

0.01

2,4,5,T

0.001

0.002

2,4,5 TP (Silvex)

0.002

DBCP (Dibromochloro propane)

No identifiable herbicide peaks _____

PESTICIDE REPORT
ENGINEERING-SCIENCE - BERKELEY LABORATORY

Sample ID McKellan AFB

ES ID 820133

BW #29

Aliquot analyzed _____

Date Received 5 February 1982

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist _____

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	

No identifiable pesticide peaks _____

METALS REPORT FORM

Sample ID McClellan AFBES ID 820133BW #29

Aliquot analyzed _____

Date Received 5 February 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>11.5/2</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1 } total 10 }	<0.05	
Chromium (+6)	c	—			
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.001	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

APPENDIX K
ANALYTICAL DATA
BASE MONITORING WELLS

22 April 1982 sample

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science CAL LAB NO. 14428-1
CLIENT I.D. Wall MW #4

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 18TH STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-104-1

CLIENT I.D. Well #4

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	15
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID

NW
KPT #4

ES ID 8206-42

Aliquot analyzed 1L

Date Received 4/29-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed

Chemist MB

Approved

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	2.76
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.377
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	0.06
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

4/29

METALS REPORT FORM

Sample ID McClellan AFBES ID 220642MW #4

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>File #</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.016	
Arsenic	p,h,c,d,o	---	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	0.014	
Calcium		50	---		
Chromium (+3)	p,h,c,d,o	20	1	Total 0.08	
Chromium (+6)	c	---	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	---		
Magnesium		1	---		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	---	0.5	0.0007	
Molybdenum	c	500	---		
Nickel	p,c,o	40	1	0.07	
Potassium		10	---		
Selenium	p,h,c,d	---	10	0.016	
Silicon		10	---		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.10	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

3/31 sample

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-2

CLIENT I.D. Well MW 6

VOLATILES		ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	24
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-2

CLIENT I.D. Well #6

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	16
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID W211 #6 ^{MW}

ES ID E20440

Aliquot analyzed 1 L

Date Received 4/1-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin		
Alpha BHC		
Beta BHC		
Delta BHC		
Gamma BHC (lindane)		
Chlordane		
DDD (TDE)		
DDE		
DDT		
Dieldrin		
Endosulfan I		
Endosulfan II		
Endosulfan sulfate		
Endrin		
Heptachlor	0.002	0.70
Heptachlor epoxide		
Methoxychlor		
Toxaphene		
2,4,D	0.001	0.02
2,4,5,T	0.001	0.006
2,4,5 TP (Silvex)		
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

3/30

METALS REPORT FORM

Sample ID McClellan AFBES ID 823440MW #6

Aliquot analyzed _____

Date Received 1 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>11/8/82</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.109	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	0.06	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

64/18

8/27/82

2-186

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.028	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

3/19 sample

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14365-1

CLIENT I.D. W211 MW7; McChellan AFB

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	20
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	30
88V	vinyl chloride	ND
	1,1,2-trichloro-2,2,1-trifluoroethane	ND

* = Less than 10 ug/L
ND = Not detected

21 April 1982

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering ScienceCAL LAB NO. 14365-1CLIENT I.D. 11211 7, 11-Clella

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	1.2
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

3/31/2004

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9002

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-3

CLIENT I.D. Well #7

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	26
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	29
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

3/31 pm ph

CLIENT Engineering Science

CAL LAB NO. 144-28-3

CLIENT I.D. Well #7

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
58 benzidine	ND
88 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	13
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID ^{MW} Well #7 preES ID 820441Aliquot analyzed 1LDate Received 4/1-82Detector Used: Coulson EC Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	0.26
Alpha BHC		
Beta BHC		
Delta BHC		
Gamma BHC (lindane)		
Chlordane		
DDD (TDE)		
DDE		
DDT		
Dieldrin		
Endosulfan I		
Endosulfan II		
Endosulfan sulfate		
Endrin		
Heptachlor		
Heptachlor epoxide		
Methoxychlor		
Toxaphene		
2,4,D		
2,4,5,T		
2,4,5 TP (Silvex)		
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AD-A133 006

INSTALLATION RESTORATION PROGRAM PHASE II CONFIRMATION

3/8

MCCLELLAN AFB CALIFORNIA VOLUME 2(U)

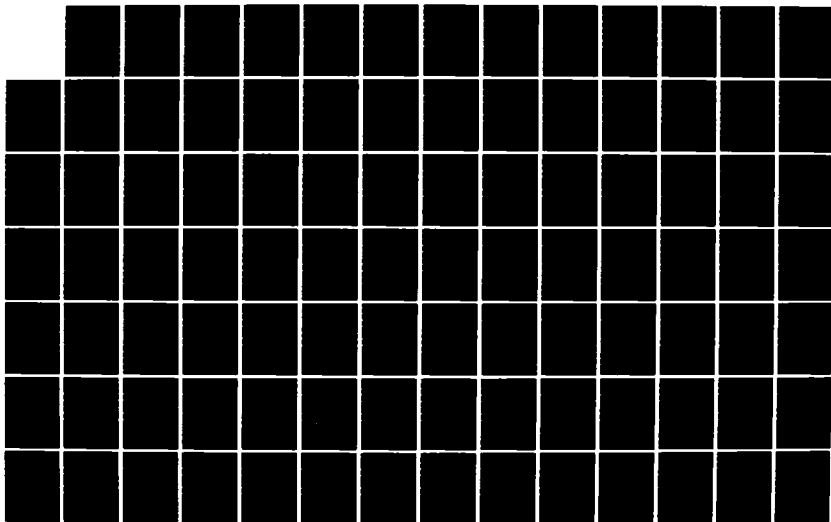
ENGINEERING-SCIENCE INC ARCADIA CALIF JUN 83

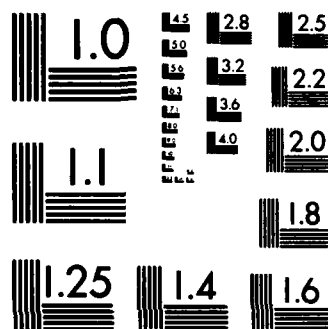
UNCLASSIFIED

F33615-80-D-4001

F/G 13/2

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

PESTICIDE/HERBICIDE REPORT FORM

Sample ID ^{MW} Well #7 post

ES ID 820442

Aliquot analyzed 1L

Date Received 4/1-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	1.03
Alpha BHC		
Beta BHC		
Delta BHC		
Gamma BHC (lindane)		
Chlordane		
DDD (TDE)		
DDE		
DDT		
Dieldrin		
Endosulfan I		
Endosulfan II		
Endosulfan sulfate		
Endrin		
Heptachlor	0.002	0.88
Heptachlor epoxide		
Methoxychlor		
Toxaphene		
2,4,D	0.001	0.02
2,4,5,T		
2,4,5 TP (Silvex)		
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

METALS REPORT FORM

Sample ID McClellan AFBES ID 820441MW# 7 (pre)

Aliquot analyzed _____

Date Received 1 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>100%</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	total 0.21	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.081	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	0.10	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.21	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

64/18

8/27/82

2-195

METALS REPORT FORM

3/29

Sample ID McClellanES ID 220442MD #7 (post)

Aliquot analyzed _____

Date Received 1 April 1922

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	total 0.09	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.023	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.15	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

3/31/80 JPL

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. Well MW 8

CAL LAB NO. 14428-4

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	*
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	*
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	*
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	61
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-4

CLIENT I.D. Well #8

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	* ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	100
67B butyl benzyl phthalate	*
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID ^{MW} Well #8ES ID EZC443Aliquot analyzed 16Date Received 4/1-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits	Found (ppb)
Aldrin		
Alpha BHC		
Beta BHC		
Delta BHC		
Gamma BHC (lindane)	0.002-	0.005
Chlordane		
DDD (TDE)		
DDE		
DDT		
Dieldrin		
Endosulfan I		
Endosulfan II		
Endosulfan sulfate		
Endrin		
Heptachlor	0.002	0.04
Heptachlor epoxide		
Methoxychlor		
Toxaphene		
2,4,D		
2,4,5,T	0.001	0.008
2,4,5 TP (Silvex)		
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

3/31

METALS REPORT FORM

Sample ID McClellan JFBES ID 320443MU #3

Aliquot analyzed _____

Date Received 1 April 1972

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <i>me/2</i>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.006	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	0.013	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total 2.90	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.98	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0006	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	0.08	
Potassium		10	—		
Selenium	p,h,c,d	—	10	0.027	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.96	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-5

CLIENT I.D. Well MW 9

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* When this well was sampled, the water level was found at a depth of 1 foot from the ground surface. The well cap on the well was missing, and rainwater had entered the well.

* = Less than 10 ug/L
ND = Not detected

4/29 sample

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science CAL LAB NO. 14556-1
CLIENT I.D. MW-9

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	25
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	20
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	225
88V	vinyl chloride	ND

ND = Not detected

2-204

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9602

PRIORITY POLLUTANT DATA SHEET

3/31 sample

CLIENT

Engineering Science

CAL LAB NO. 14428-5

CLIENT I.D. Well # 9

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	ug/L
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	MW	ug/L
41B 4-bromophenyl phenyl ether		ND
42B bis(2-chloroisopropyl)ether		ND
43B bis(2-chloroethoxy)methane		ND
52B hexachlorobutadiene		ND
53B hexachlorocyclopentadiene		ND
54B isophorone		ND
55B naphthalene		ND
56B nitrobenzene		ND
61B N-nitrosodimethylamine		ND
62B N-nitrosodiphenylamine		ND
63B N-nitrosodi-n-propylamine		ND
66B bis(2-ethylhexyl)phthalate	21	ND
67B butyl benzyl phthalate		ND
68B di-n-butyl phthalate		ND
69B di-n-octyl phthalate		ND
70B diethyl phthalate		ND
71B dimethyl phthalate		ND
72B benzo(a)anthracene		ND
73B benzo(a)pyrene		ND
74B 3,4-benzofluoranthene		ND
75B benzo(k)fluoranthene		ND
76B chrysene		ND
77B acenaphthylene		ND
78B anthracene		ND
79B benzo(ghi)perylene		ND
80B fluorene		ND
81B phenanthrene		ND
82B dibenzo(a,h)anthracene		ND
83B indeno(1,2,3-cd)pyrene		ND
84B pyrene		ND

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14556-1

CLIENT I.D. MW-9

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
88 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
188 bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID MW Well #9

ES ID E2C444

Aliquot analyzed 1L

Date Received 4/1-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	0.15
Alpha BHC	0.002	0.08
Beta BHC		
Delta BHC		
Gamma BHC (lindane)	0.002	0.12
Chlordane		
DOD (TDE)		
DDE		
DDT		
Dieldrin		
Endosulfan I		
Endosulfan II		
Endosulfan sulfate		
Endrin		
Heptachlor		
Heptachlor epoxide	0.004	0.08
Methoxychlor		
Toxaphene		
2,4,D		
2,4,5,T	0.001	0.003
2,4,5 TP (Silvex)		
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2207

PESTICIDE/HERBICIDE REPORT FORM

Sample ID 11119

ES ID 820621

Aliquot analyzed 12

Date Received 1/29-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist L1B

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.16
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.007	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	0.007
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

3/31 METALS REPORT FORM

Sample ID McGlellan AFB

ES ID 820444

MW#9

Aliquot analyzed _____

Date Received 1 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.29	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0006	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.15	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

METALS REPORT FORM

Sample ID McClellan AFB
MW #9

4/28

ES ID 0621

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>10.0/2</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	0.12	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	40.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.05	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-6

CLIENT I.D. Well MWID

VOLATILES		ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	17
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	19
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	500
30V	1,2-trans-dichloroethylene	15
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	140
88V	vinyl chloride	ND

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-6

CLIENT I.D. Well # 10

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	21
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	MW	ug/L
41B 4-bromophenyl phenyl ether		ND
42B bis(2-chloroisopropyl)ether		ND
43B bis(2-chloroethoxy)methane		ND
52B hexachlorobutadiene		ND
53B hexachlorocyclopentadiene		ND
54B isophorone		ND
55B naphthalene		ND
56B nitrobenzene		ND
61B N-nitrosodimethylamine		ND
62B N-nitrosodiphenylamine		ND
63B N-nitrosodi-n-propylamine		ND
66B bis(2-ethylhexyl)phthalate		13
67B butyl benzyl phthalate		ND
68B di-n-butyl phthalate		ND
69B di-n-octyl phthalate		ND
70B diethyl phthalate		ND
71B dimethyl phthalate		ND
72B benzo(a)anthracene		ND
73B benzo(a)pyrene		ND
74B 3,4-benzofluoranthene		ND
75B benzo(k)fluoranthene		ND
76B chrysene		ND
77B acenaphthylene		ND
78B anthracene		ND
79B benzo(ghi)perylene		ND
80B fluorene		ND
81B phenanthrene		ND
82B dibenzo(a,h)anthracene		ND
83B indeno(1,2,3-cd)pyrene		ND
84B pyrene		ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Well #10

ES ID 820445

Aliquot analyzed 12

Date Received 4/1-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LIB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	1.80
Alpha BHC		
Beta BHC		
Delta BHC		
Gamma BHC (lindane)		
Chlordane		
DOD (TDE)		
DDE		
DDT		
Dieldrin		
Endosulfan I		
Endosulfan II		
Endosulfan sulfate		
Endrin		
Heptachlor		
Heptachlor epoxide		
Methoxychlor		
Toxaphene		
2,4,D		
2,4,5,T		
2,4,5 TP (Silvex)		
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

METALS REPORT FORM

Sample ID McClellan AFBES ID 820445MW #10

Aliquot analyzed _____

Date Received 1 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.007	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	0.012	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total 0.12	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.03	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0010	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	0.10	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.073	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. Well MW 11

CAL LAB NO. 14428-7

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	*
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	4300
13V	1,1-dichloroethane	170
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	40
29V	1,1-dichloroethylene	19,300
30V	1,2-trans-dichloroethylene	180
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	3700
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	10
86V	toluene	80
87V	trichloroethylene	2100
88V	vinyl chloride	ND 20 ppb

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

8/10

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-1

CLIENT I.D. Well #11

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	12,000 ✓
13V	1,1-dichloroethane	250 ✓
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	* ✓
29V	1,1-dichloroethylene	63000 ✓
30V	1,2-trans-dichloroethylene	200 ✓
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	5000 ✓
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-2802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-7

CLIENT I.D. Well #11

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	ug/L
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	X
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B bexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	X
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	14
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

8/13

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-1AB

CLIENT I.D. Well #11 ✓

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	8 ✓
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	32 ✓
26B 1,3-dichlorobenzene	* ✓
27B 1,4-dichlorobenzene	10 ✓
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	25 ✓
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID MW 00211 # 11

ES ID E20446

Aliquot analyzed 1 L

Date Received 4/1-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LJB

Approved _____

	Detection Limits	Found (ppb)
Aldrin		
Alpha BHC		
Beta BHC		
Delta BHC		
Gamma BHC (lindane)		
Chlordane		
DDD (TDE)		
DDE		
DDT		
Dieldrin		
Endosulfan I		
Endosulfan II		
Endosulfan sulfate		
Endrin		
Heptachlor		
Heptachlor epoxide		
Methoxychlor		
Toxaphene		
2,4,D		
2,4,5,T		
2,4,5 TP (Silvex)		
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

METALS REPORT FORM

Sample ID McClendon AFBES ID 820446MW # 113/30

Aliquot analyzed _____

Date Received 1 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total 0.07	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.093	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0021	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	0.049	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	20.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.036	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

4/29/88 pm

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14556-2

CLIENT I.D. MWR

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	2700
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	4200
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	70
86V	toluene	10
87V	trichloroethylene	930
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

5886 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

8/13

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. Wellm/2

CAL LAB NO. 15052-2V

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	520 ✓
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	2500 ✓
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	7 ✓
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	18 ✓
86V	toluene	nd
87V	trichloroethylene	160 ✓
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14556-2

CLIENT I.D. MW12

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	ug/L
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

California Analytical Laboratories, Inc.

5805 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6106

8/13

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-2

CLIENT I.D. Well #12 ✓

ACID COMPOUNDS	µg/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	µg/L
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	121
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	µg/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID 11012ES ID 8206-22Aliquot analyzed 12Date Received 4-29-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	0.004
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-209

METALS REPORT FORM

Sample ID McClellan AFBMW# 123/30ES ID 0622

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1 } total 10)	<0.05	
Chromium (+6)	c	—			
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.07	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

3/31 sample

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-8

CLIENT I.D. Well MW13

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	300
13V	1,1-dichloroethane	40
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	1100
30V	1,2-trans-dichloroethylene	80
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	1000
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	20
86V	toluene	ND
87V	trichloroethylene	1470
88V	vinyl chloride	ND 50 ppb

* = Less than 10 ug/L

ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

8/10

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-3

CLIENT I.D. Well #13

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	68 ✓
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	780 ✓
30V	1,2-trans-dichloroethylene	6 ✓
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	* ✓
86V	toluene	nd
87V	trichloroethylene	230 ✓
88V	vinyl chloride	* ✓
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-8

CLIENT I.D. Well#13

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	MW	ug/L
41B 4-bromophenyl phenyl ether		ND
42B bis(2-chloroisopropyl)ether		ND
43B bis(2-chloroethoxy)methane		ND
52B hexachlorobutadiene		ND
53B hexachlorocyclopentadiene		ND
54B isophorone		ND
55B naphthalene		ND
56B nitrobenzene		ND
61B N-nitrosodimethylamine		ND
62B N-nitrosodiphenylamine		ND
63B N-nitrosodi-n-propylamine		ND
66B bis(2-ethylhexyl)phthalate		64
67B butyl benzyl phthalate		ND
68B di-n-butyl phthalate		ND
69B di-n-octyl phthalate		ND
70B diethyl phthalate		ND
71B dimethyl phthalate		ND
72B benzo(a)anthracene		ND
73B benzo(a)pyrene		ND
74B 3,4-benzofluoranthene		ND
75B benzo(k)fluoranthene		ND
76B chrysene		ND
77B acenaphthylene		ND
78B anthracene		ND
79B benzo(ghi)perylene		ND
80B fluorene		ND
81B phenanthrene		ND
82B dibenzo(a,h)anthracene		ND
83B indeno(1,2,3-cd)pyrene		ND
84B pyrene		ND

California Analytical Laboratories, Inc.

5886 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

0/10

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-3

CLIENT I.D. Well/HW/3

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID 11p1L #13 ^{MW}ES ID E20447Aliquot analyzed 1LDate Received 4/1-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LHS

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin		
Alpha BHC		
Beta BHC		
Delta BHC		
Gamma BHC (lindane)		
Chlordane		
DDD (TDE)		
DDE		
DDT		
Dieldrin		
Endosulfan I		
Endosulfan II		
Endosulfan sulfate		
Endrin		
Heptachlor		
Heptachlor epoxide		
Methoxychlor		
Toxaphene		
2,4,D		
2,4,5,T	0.001	0.009
2,4,5 TP (Silvex)		
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

METALS REPORT FORM

Sample ID McClellan AFBMW# 13ES ID 820447

Aliquot analyzed _____

Date Received 1 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.022	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0010	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-9

CLIENT I.D. Well #N14

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	*
6V	carbon tetrachloride	ND
7V	chlorobenzene	*
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	8700
13V	1,1-dichloroethane	110
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	120
29V	1,1-dichloroethylene	4600
30V	1,2-trans-dichloroethylene	130
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	3000
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	50
87V	trichloroethylene	5800
88V	vinyl chloride	ND 25 ppb

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 391-6105

8113

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science CAL LAB NO. 15052-4
CLIENT I.D. Well 14
MW

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	2300
13V	1,1-dichloroethane	100
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	* ✓
29V	1,1-dichloroethylene	17000 ✓
30V	1,2-trans-dichloroethylene	200 ✓
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	11,000 ✓
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14428-9

CLIENT I.D. well #14

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	19
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	*

BASE/NEUTRAL COMPOUNDS	ug/L
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	22
26B 1,3-dichlorobenzene	*
27B 1,4-dichlorobenzene	*
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	11
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

California Analytical Laboratories, Inc.

5886 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-8105

8/13

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-4AB

CLIENT I.D. W211/4

ACID COMPOUNDS		ug/L
21A	2,4,6-trichlorophenol	nd
22A	p-chloro-m-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	94✓
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	nd
65A	phenol	400✓

BASE/NEUTRAL COMPOUNDS		ug/L
1B	acenaphthene	nd
5B	benzidine	nd
8B	1,2,4-trichlorobenzene	61✓
9B	hexachlorobenzene	nd
12B	hexachloroethane	nd
18B	bis(2-chloroethyl)ether	nd
20B	2-chloronaphthalene	nd
25B	1,2-dichlorobenzene	100✓
26B	1,3-dichlorobenzene	28✓
27B	1,4-dichlorobenzene	40✓
28B	3,3'-dichlorobenzidine	nd
35B	2,4-dinitrotoluene	nd
36B	2,6-dinitrotoluene	nd
37B	1,2-diphenylhydrazine (as azobenzene)	nd
39B	fluoranthene	nd
40B	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS		ug/L
41B	4-bromophenyl phenyl ether	nd
42B	bis(2-chloroisopropyl)ether	nd
43B	bis(2-chloroethoxy)methane	nd
52B	hexachlorobutadiene	nd
53B	hexachlorocyclopentadiene	nd
54B	isophorone	nd
55B	naphthalene	*✓
56B	nitrobenzene	nd
61B	N-nitrosodimethylamine	nd
62B	N-nitrosodiphenylamine	nd
63B	N-nitrosodi-n-propylamine	nd
66B	bis(2-ethylhexyl)phthalate	nd
67B	butyl benzyl phthalate	nd
68B	di-n-butyl phthalate	nd
69B	di-n-octyl phthalate	nd
70B	diethyl phthalate	nd
71B	dimethyl phthalate	nd
72B	benzo(a)anthracene	nd
73B	benzo(a)pyrene	nd
74B	3,4-benzofluoranthene	nd
75B	benzo(k)fluoranthene	nd
76B	chrysene	nd
77B	acenaphthylene	nd
78B	anthracene	nd
79B	benzo(ghi)perylene	nd
80B	fluorene	nd
81B	phenanthrene	nd
82B	dibenzo(a,h)anthracene	nd
83B	indeno(1,2,3-cd)pyrene	nd
84B	pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Well #14 ^{MW}

ES ID P20448

Aliquot analyzed 12

Date Received 4/1-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	6.97
Alpha BHC		
Beta BHC		
Delta BHC		
Gamma BHC (lindane)		
Chlordane		
DDD (TDE)		
DDE		
DDT		
Dieldrin		
Endosulfan I		
Endosulfan II		
Endosulfan sulfate		
Endrin		
Heptachlor		
Heptachlor epoxide		
Methoxychlor		
Toxaphene		
2,4,D		
2,4,5,T	0.001	0.005
2,4,5 TP (Silvex)		
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-243

METALS REPORT FORM

Sample ID McClellan AFBES ID 820447MW # 143/30

Aliquot analyzed _____

Date Received 1 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected mg/g	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	total 0.09	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.057	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0011	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

4/29/20m-plw

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14556-3

CLIENT I.D. MW 15

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	680
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	2200
13V	1,1-dichloroethane	225
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	20
29V	1,1-dichloroethylene	5980
30V	1,2-trans-dichloroethylene	135
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	5000
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	2800
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

8/13

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. W21/MW/5

CAL LAB NO. 15052-5

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	10✓
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	2500✓
13V	1,1-dichloroethane	200✓
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	40✓
29V	1,1-dichloroethylene	9600✓
30V	1,2-trans-dichloroethylene	110✓
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	3000✓
88V	vinyl chloride	*
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14556 -3

CLIENT I.D. MW 15

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

8/10

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-5

CLIENT I.D. Well #151

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	50'
26B 1,3-dichlorobenzene	8'
27B 1,4-dichlorobenzene	12'
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID MU 15ES ID 820627Aliquot analyzed 12Date Received 4/29-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist L1B

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.02
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	0.36
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-252

METALS REPORT FORM

Sample ID McClellan AFBES ID 0627MW#153/30

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>1118/2</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.006	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	0.012 *	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	0.07	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

*Average of quality assurance duplicates.

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.05	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

APPENDIX L

ANALYTICAL DATA
STAGE I MONITORING WELLS

STAGE I SHALLOW WELLS

6/16 sample

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. mw 165

CAL LAB NO. 14772-6

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

SL1

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. Well 165

CAL LAB NO. 15052-6

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	10 ✓
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	10 ✓
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L

ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 147.72-6

CLIENT I.D. MW/65

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-o-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	ug/L
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

California Analytical Laboratories, Inc.

5805 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

8/17

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-6

CLIENT I.D. Well 165 ✓

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID mw 16.5ES ID E20799016-82Aliquot analyzed 12Date Received 6-20-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist L1B

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	0.503
Alpha BHC	0.002	
Beta BHC	0.004	0.142
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.056
2,4,5,T	0.001	0.020
2,4,5 TP (Silvex)	0.002	0.094
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-259

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID 820949Nell # 165Aliquot analyzed 12Date Received 18 August 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 27 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	0.024
Beta BHC	0.004	0.009
Delta BHC	0.004	0.025
Gamma BHC (lindane)	0.002	0.020
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	< 0.03
Endrin	0.009	
Heptachlor	0.002	0.015
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

no identifiable
herbicides

2-260

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820949

MW #165

Aliquot Analyzed 1L

Date Received 18 August 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 27 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFB
MW# 165ES ID 820799Date Received 24 June 1982

Aliquot analyzed _____

Date analyzed _____

Method Used _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.008	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0027	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

6/16 sample

California Analytical Laboratories, Inc.

5886 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6106

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. MW175

CAL LAB NO. 14772-5

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

2-264

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6106

8/17

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. 175

CAL LAB NO. 15052-8

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

2-265

6/16/82 JMC

California Analytical Laboratories, Inc.

401 NORTH 10th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

14772-5

CLIENT I.D.

MW175

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	nd
22A	p-chloro-m-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	nd
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS

8	acenaphthene	nd
58	benzidine	nd
88	1,2,4-trichlorobenzene	nd
98	hexachlorobenzene	nd
128	hexachloroethane	nd
188	bis(2-chloroethyl)ether	nd
208	2-chloronaphthalene	nd
258	1,2-dichlorobenzene	nd
268	1,3-dichlorobenzene	nd
278	1,4-dichlorobenzene	nd
288	3,3'-dichlorobenzidine	nd
358	2,4-dinitrotoluene	nd
368	2,6-dinitrotoluene	nd
378	1,2-diphenylhydrazine (as azobenzene)	nd
398	fluoranthene	nd
408	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS

ug/L

418	4-bromophenyl phenyl ether	nd
428	bis(2-chloroisopropyl)ether	nd
438	bis(2-chloroethoxy)methane	nd
528	hexachlorobutadiene	nd
538	hexachlorocyclopentadiene	nd
548	isophorone	nd
558	naphthalene	nd
568	nitrobenzene	nd
618	N-nitrosodimethylamine	nd
628	N-nitrosodiphenylamine	nd
638	N-nitrosodi-n-propylamine	nd
668	bis(2-ethylhexyl)phthalate	nd
678	butyl benzyl phthalate	nd
688	di-n-butyl phthalate	nd
698	di-n-octyl phthalate	nd
708	diethyl phthalate	nd
718	dimethyl phthalate	nd
728	benzo(a)anthracene	nd
738	benzo(a)pyrene	nd
748	3,4-benzofluoranthene	nd
758	benzo(k)fluoranthene	nd
768	chrysene	nd
778	acenaphthylene	nd
788	anthracene	nd
798	benzo(ghi)perylene	nd
808	fluorene	nd
818	phenanthrene	nd
828	dibenzo(a,h)anthracene	nd
838	indeno(1,2,3-cd)pyrene	nd
848	pyrene	nd

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-8105

8/17

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Service

CAL LAB NO. 15052-8

CLIENT I.D. Well 175 ✓

ACID COMPOUNDS		ug/L
21A	2,4,6-trichlorophenol	nd
22A	p-chloro-m-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	nd
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS		ug/L
1B	acenaphthene	nd
5B	benzidine	nd
8B	1,2,4-trichlorobenzene	nd
9B	hexachlorobenzene	nd
12B	hexachloroethane	nd
18B	bis(2-chloroethyl)ether	nd
20B	2-chloronaphthalene	nd
25B	1,2-dichlorobenzene	nd
26B	1,3-dichlorobenzene	nd
27B	1,4-dichlorobenzene	nd
28B	3,3'-dichlorobenzidine	nd
35B	2,4-dinitrotoluene	nd
36B	2,6-dinitrotoluene	nd
37B	1,2-diphenylhydrazine (as azobenzene)	nd
39B	fluoranthene	nd
40B	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS		ug/L
41B	4-bromophenyl phenyl ether	nd
42B	bis(2-chloroisopropyl)ether	nd
43B	bis(2-chloroethoxy)methane	nd
52B	bexachlorobutadiene	nd
53B	hexachlorocyclopentadiene	nd
54B	isophorone	nd
55B	naphthalene	nd
56B	nitrobenzene	nd
61B	N-nitrosodimethylamine	nd
62B	N-nitrosodiphenylamine	nd
63B	N-nitrosodi-n-propylamine	nd
66B	bis(2-ethylhexyl)phthalate	22 ✓
67B	butyl benzyl phthalate	nd
68B	di-n-butyl phthalate	nd
69B	di-n-octyl phthalate	nd
70B	diethyl phthalate	nd
71B	dimethyl phthalate	nd
72B	benzo(a)anthracene	nd
73B	benzo(a)pyrene	nd
74B	3,4-benzofluoranthene	nd
75B	benzo(k)fluoranthene	nd
76B	chrysene	nd
77B	acenaphthylene	nd
78B	anthracene	nd
79B	benzo(ghi)perylene	nd
80B	fluorene	nd
81B	phenanthrene	nd
82B	dibenzo(a,h)anthracene	nd
83B	indeno(1,2,3-cd)pyrene	nd
84B	pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID mw 175

ES ID ECCF.C.1

6/14-82

Aliquot analyzed 12

Date Received 6/24-82

Detector Used: Coulson, EC Flame, PID

Date analyzed _____

Chemist LB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	0.112
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.114
2,4,5,T	0.001	0.031
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID 820951Well # 175Aliquot analyzed 1.0Date Received 18 August 1982Detector Used: Coulson EC, Flame, PIDDate analyzed 31 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

*no identifiable pesticide peaks**no identifiable herbicide peaks*

AROCOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820951

MW #175

Aliquot Analyzed 1L

Date Received 18 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 31 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McKellan AFBES ID 820801MW #175

Aliquot analyzed _____

Date Received 24 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <i>mg/g</i>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.011	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0012	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
h - EPA hazardous waste
c - Ca. Dept. Health Services hazardous waste
d - EPA drinking water
o - Ocean waters of California

6/16/82
sample

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. MW185

CAL LAB NO. 14772-2

<u>VOLATILES</u>		<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

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SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. 185

CAL LAB NO. 15052-10

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

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California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-0002

PRIORITY POLLUTANT DATA SHEET *jef*

CLIENT

Engineering ScienceCAL LAB NO. 14772-2CLIENT I.D. MW185ACID COMPOUNDS

µg/L

21A	2,4,6-trichlorophenol	nd
22A	p-chloro-o-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
54A	pentachlorophenol	nd
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS

18	acenaphthene	nd
58	benzidine	nd
88	1,2,4-trichlorobenzene	nd
98	hexachlorobenzene	nd
128	hexachloroethane	nd
188	bis(2-chloroethyl)ether	nd
208	2-chloronaphthalene	nd
258	1,2-dichlorobenzene	nd
268	1,3-dichlorobenzene	nd
278	1,4-dichlorobenzene	nd
288	3,3'-dichlorobenzidine	nd
358	2,4-dinitrotoluene	nd
368	2,6-dinitrotoluene	nd
378	1,2-diphenylhydrazine (as azobenzene)	nd
398	fluoranthene	nd
408	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS

µg/L

418	4-bromophenyl phenyl ether	nd
428	bis(2-chloroisopropyl)ether	nd
438	bis(2-chloroethoxy)methane	nd
528	hexachlorobutadiene	nd
538	hexachlorocyclopentadiene	nd
548	isophorone	nd
558	naphthalene	nd
568	nitrobenzene	nd
618	N-nitrosodimethylamine	nd
628	N-nitrosodiphenylamine	nd
638	N-nitrosodi-n-propylamine	nd
668	bis(2-ethylhexyl)phthalate	nd
678	butyl benzyl phthalate	nd
688	di-n-butyl phthalate	nd
698	di-n-octyl phthalate	nd
708	diethyl phthalate	nd
718	dimethyl phthalate	nd
728	benzo(a)anthracene	nd
738	benzo(a)pyrene	nd
748	3,4-benzofluoranthene	nd
758	benzo(k)fluoranthene	nd
768	chrysene	nd
778	acenaphthylene	nd
788	anthracene	nd
798	benzo(ghi)perylene	nd
808	fluorene	nd
818	phenanthrene	nd
828	dibenzo(a,h)anthracene	nd
838	indeno(1,2,3-cd)pyrene	nd
848	pyrene	nd

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8/16

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-117

CLIENT I.D. WeiH85

ACID COMPOUNDS		ug/L
21A	2,4,6-trichlorophenol	nd
22A	p-chloro-m-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	6 ✓
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS		
1B	acenaphthene	nd
5B	benzidine	nd
8B	1,2,4-trichlorobenzene	nd
9B	hexachlorobenzene	nd
12B	hexachloroethane	nd
18B	bis(2-chloroethyl)ether	nd
20B	2-chloronaphthalene	nd
25B	1,2-dichlorobenzene	nd
26B	1,3-dichlorobenzene	nd
27B	1,4-dichlorobenzene	nd
28B	3,3'-dichlorobenzidine	nd
35B	2,4-dinitrotoluene	nd
36B	2,6-dinitrotoluene	nd
37B	1,2-diphenylhydrazine (as azobenzene)	nd
39B	fluoranthene	nd
40B	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS		ug/L
41B	4-bromophenyl phenyl ether	nd
42B	bis(2-chloroisopropyl)ether	nd
43B	bis(2-chloroethoxy)methane	nd
52B	bexachlorobutadiene	nd
53B	hexachlorocyclopentadiene	nd
54B	isophorone	nd
55B	naphthalene	nd
56B	nitrobenzene	nd
61B	N-nitrosodimethylamine	nd
62B	N-nitrosodiphenylamine	nd
63B	N-nitrosodi-n-propylamine	nd
66B	bis(2-ethylhexyl)phthalate	8 ✓
67B	butyl benzyl phthalate	nd
68B	di-n-butyl phthalate	nd
69B	di-n-octyl phthalate	nd
70B	diethyl phthalate	nd
71B	dimethyl phthalate	nd
72B	benzo(a)anthracene	nd
73B	benzo(a)pyrene	nd
74B	3,4-benzofluoranthene	nd
75B	benzo(k)fluoranthene	nd
76B	chrysene	nd
77B	acenaphthylene	nd
78B	anthracene	nd
79B	benzo(ghi)perylene	nd
80B	fluorene	nd
81B	phenanthrene	nd
82B	dibenzo(a,h)anthracene	nd
83B	indeno(1,2,3-cd)pyrene	nd
84B	pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID mw 185ES ID 8257986/15-82Aliquot analyzed 12Date Received 6/24-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	0.052
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.138
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

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PESTICIDE/HERBICIDE REPORT FORM

Sample ID USClellan AFBES ID 820953Well # 1ESAliquot analyzed 12Date Received 18 August, 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 26 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	0.032
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.036
Chlordane	0.04	
DOD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	0.027
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silver)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

no identifiable
herbicide peaks

2-278

AROCOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820953

MW # 185

Aliquot Analyzed _____

Date Received 18 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 26 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFBES ID 822798MW # 185Aliquot analyzed Date Received 24 June 1982Method Used Date analyzed Chemist Approved

Element	Code	Detection Limit (ppb)		Detected <small>SLA/8</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	2 total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0016	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

California Analytical Laboratories, Inc.

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5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. Well 195

CAL LAB NO. 15052-11

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	*
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

2-282

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8822

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 145376 - 6MB

CLIENT I.D. MW 28195

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
8 acenaphthene	ND
58 benzidine	ND
88 1,2,4-trichlorobenzene	ND
98 hexachlorobenzene	ND
128 hexachloroethane	ND
188 bis(2-chloroethyl)ether	ND
208 2-chloronaphthalene	ND
258 1,2-dichlorobenzene	ND
268 1,3-dichlorobenzene	ND
278 1,4-dichlorobenzene	ND
288 3,3'-dichlorobenzidine	ND
358 2,4-dinitrotoluene	ND
368 2,6-dinitrotoluene	ND
378 1,2-diphenylhydrazine (as azobenzene)	ND
398 fluoranthene	ND
408 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
418 4-bromophenyl phenyl ether	ND
428 bis(2-chloroisopropyl)ether	ND
438 bis(2-chloroethoxy)methane	ND
528 hexachlorobutadiene	ND
538 hexachlorocyclopentadiene	ND
548 isophorone	ND
558 naphthalene	ND
568 nitrobenzene	ND
618 N-nitrosodimethylamine	ND
628 N-nitrosodiphenylamine	ND
638 N-nitrosodi-n-propylamine	ND
668 bis(2-ethylhexyl)phthalate	ND
678 butyl benzyl phthalate	ND
688 di-n-butyl phthalate	ND
698 di-n-octyl phthalate	ND
708 diethyl phthalate	ND
718 dimethyl phthalate	ND
728 benzo(a)anthracene	ND
738 benzo(a)pyrene	ND
748 3,4-benzofluoranthene	ND
758 benzo(k)fluoranthene	ND
768 chrysene	ND
778 acenaphthylene	ND
788 anthracene	ND
798 benzo(ghi)perylene	ND
808 fluorene	ND
818 phenanthrene	ND
828 dibenzo(a,h)anthracene	ND
838 indeno(1,2,3-cd)pyrene	ND
848 pyrene	ND

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6108

8/16

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-11

CLIENT I.D. Well 195

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	7
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	20
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

2-084

PESTICIDE/HERBICIDE REPORT FORM

Sample ID MW 195

ES ID E22640

Aliquot analyzed 12

Date Received 4/29-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.047
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	0.20
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID E20955Well# 195Aliquot analyzed 12Date Received 18 August, 1982Detector Used: Coulson, EC, Flame, FIDDate analyzed 31 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	0.002 0.056
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

no identifiable
herbicide peaks

2-286

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820955

MW #195

Aliquot Analyzed 12

Date Received 18 August 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 31 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

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METALS REPORT FORM

Sample ID McClellan AFB
MW # 195ES ID 220640Date Received 29 April 1972

Aliquot analyzed _____

Date analyzed _____

Method Used _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>100/2</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.06	
Arsenic	p,h,c,d,o	—	10	0.66	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	0.45	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	Total 4.17	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	1.18	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.08	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0016	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	1.33	
Potassium		10	—		
Selenium	p,h,c,d	—	10	0.355	
Silicon		10	—		

AD-A133 006

INSTALLATION RESTORATION PROGRAM PHASE II CONFIRMATION

4/8

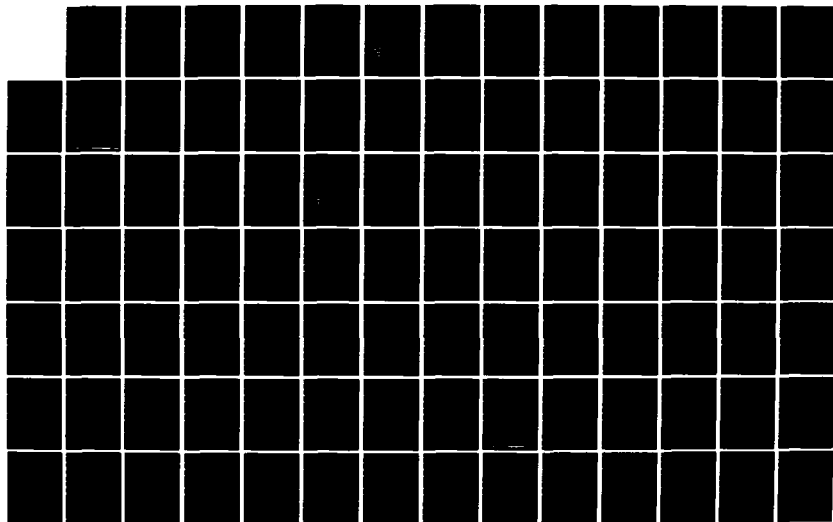
MCCLELLAN AFB CALIFORNIA VOLUME 2(U)

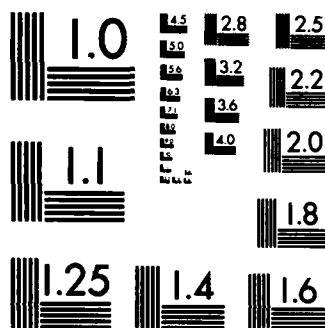
ENGINEERING-SCIENCE INC ARCADIA CALIF JUN 83

UNCLASSIFIED

F33615-80-D-4001

F/G 13/2 NL





Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	40.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	1.75	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

4/29 10M PLW

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14556-7

CLIENT I.D. MW 205

VOLATILES

ug/l or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	*
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

2-290

6/7/82 sample

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science CAL LAB NO. 14723-15
CLIENT I.D. M.W. 205

	<u>VOLATILES</u>	<u>ug/L or ug/Kg</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	45
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	220
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	440
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

2-291

813

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15015-1
CLIENT I.D.: 20S

PP#	<u>VOLATILES</u>	ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1,-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	S ✓
87V	trichloroethylene	ND
88V	vinyl chloride	ND
	* less than 10ug/L	
	ND= not detected	

COMMENTS:

California Analytical Laboratories, Inc.

2-292

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8807

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14728-2

CLIENT I.D. 225 205

ACID COMPOUNDS *see cover letter! ug/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-o-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS *see cover letter!

18	acenaphthene	ND
58	benzidine	ND
88	1,2,4-trichlorobenzene	ND
98	hexachlorobenzene	ND
128	hexachloroethane	ND
188	bis(2-chloroethyl)ether	ND
208	2-chloronaphthalene	ND
258	1,2-dichlorobenzene	ND
268	1,3-dichlorobenzene	ND
278	1,4-dichlorobenzene	ND
288	3,3'-dichlorobenzidine	ND
358	2,4-dinitrotoluene	ND
368	2,6-dinitrotoluene	ND
378	1,2-diphenylhydrazine (as azobenzene)	ND
398	fluoranthene	ND
408	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS ug/L

418	4-bromophenyl phenyl ether	ND
428	bis(2-chloroisopropyl)ether	ND
438	bis(2-chloroethoxy)methane	ND
528	hexachlorobutadiene	ND
538	hexachlorocyclopentadiene	ND
548	isophorone	ND
558	naphthalene	ND
568	nitrobenzene	ND
618	N-nitrosodimethylamine	ND
628	N-nitrosodiphenylamine	ND
638	N-nitrosodi-n-propylamine	ND
668	bis(2-ethylhexyl)phthalate	ND
678	butyl benzyl phthalate	ND
688	di-n-butyl phthalate	ND
698	di-n-octyl phthalate	ND
708	diethyl phthalate	ND
718	dimethyl phthalate	ND
728	benzo(a)anthracene	ND
738	benzo(a)pyrene	ND
748	3,4-benzofluoranthene	ND
758	benzo(k)fluoranthene	ND
768	chrysene	ND
778	acenaphthylene	ND
788	anthracene	ND
798	benzo(ghi)perylene	ND
808	fluorene	ND
818	phenanthrene	ND
828	dibenzo(a,h)anthracene	ND
838	indeno(1,2,3-cd)pyrene	ND
848	pyrene	ND

PAUL A. TAYLOR, Ph.D.
PRESIDENT

CHARLES J. SODERQUIST, Ph.D.
VICE PRESIDENT

ANTHONY S. WONG, Ph.D.
VICE PRESIDENT

RUBY A. ULRICH
SECRETARY/TREASURER

California Analytical Laboratories, Inc.

8885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 391-8108

8111

PRIORITY POLLUTANT DATA SUMMARY SHEET

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15015-1
CLIENT I.D.: WELL 20S

ACID COMPOUNDS

21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS

1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzene	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	90
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	220
79B benzo(ghi)perylene	ND
80B fluorene	90
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

* = less than a detection limit of 200 ug/L

ND = not detected

2-2294

PESTICIDE/HERBICIDE REPORT FORM

 Sample ID ^{m.w.} 11211205
5/25-82
ES ID 820775Aliquot analyzed 12Date Received 6/1-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LJB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	0.008
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-295

PESTICIDE/HERBICIDE REPORT FORM

Sample ID M^c Clellan AFBES ID 820925Well # 205Aliquot analyzed 1LDate Received 11 Aug 82Detector Used: Coulson, EC, Flame, PIDDate analyzed 15 Sept 82Chemist HF

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.13
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

no identifiable pesticide peaks

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-296

AROCLOR (PCB) REPORT FORM

5-

Sample ID McClellan AFB

ES ID 820 925

MW # 20 S

Aliquot Analyzed 1 L

Date Received 11 August 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 15 September 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McCallen AFBES ID 820775MW #205

Aliquot analyzed _____

Date Received 8 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>MLA/C</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.026	
Arsenic	p,h,c,d,o	—	10	0.24	
Barium	h,c,d	1,000	5		
Beryllium	p,c				
Cadmium	p,h,c,d,o	5	0.1	0.02	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.18	
Potassium		10	—		
Selenium	p,h,c,d	—	10	0.074	
Silicon			—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
h - EPA hazardous waste
c - Ca. Dept. Health Services hazardous waste
d - EPA drinking water
o - Ocean waters of California

6/16 sample

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering ScienceCAL LAB NO. 14772-03CLIENT I.D. MW215

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

2-300

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15031-2

CLIENT I.D.: #21 S

PP#	<u>VOLATILES</u>	ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1,-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* less than 10ug/L

ND= not detected

COMMENTS:

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14772-13

CLIENT I.D. mw 215

ACID COMPOUNDS		µg/L	BASE/NEUTRAL COMPOUNDS		µg/L
21A	2,4,6-trichlorophenol	nd	41B	4-bromophenyl phenyl ether	nd
22A	p-chloro-m-cresol	nd	42B	bis(2-chloroisopropyl)ether	nd
24A	2-chlorophenol	nd	43B	bis(2-chloroethoxy)methane	nd
31A	2,4-dichlorophenol	nd	52B	hexachlorobutadiene	nd
34A	2,4-dimethylphenol	nd	53B	hexachlorocyclopentadiene	nd
57A	2-nitrophenol	nd	54B	isophorone	nd
58A	4-nitrophenol	nd	55B	naphthalene	nd
59A	2,4-dinitrophenol	nd	56B	nitrobenzene	nd
60A	4,6-dinitro-o-cresol	nd	61B	N-nitrosodimethylamine	nd
64A	pentachlorophenol	nd	62B	N-nitrosodiphenylamine	nd
65A	phenol	nd	63B	N-nitrosodi-n-propylamine	nd
BASE/NEUTRAL COMPOUNDS			66B	bis(2-ethylhexyl)phthalate	230
78	acenaphthene	nd	67B	butyl benzyl phthalate	nd
58	benzidine	nd	68B	di-n-butyl phthalate	nd
88	1,2,4-trichlorobenzene	nd	69B	di-n-octyl phthalate	nd
98	hexachlorobenzene	nd	70B	diethyl phthalate	nd
12B	hexachloroethane	nd	71B	dimethyl phthalate	nd
18B	bis(2-chloroethyl)ether	nd	72B	benzo(a)anthracene	nd
20B	2-chloronaphthalene	nd	73B	benzo(a)pyrene	nd
25B	1,2-dichlorobenzene	nd	74B	3,4-benzofluoranthene	nd
26B	1,3-dichlorobenzene	nd	75B	benzo(k)fluoranthene	nd
27B	1,4-dichlorobenzene	nd	76B	chrysene	nd
28B	3,3'-dichlorobenzidine	nd	77B	acenaphthylene	nd
35B	2,4-dinitrotoluene	nd	78B	anthracene	nd
36B	2,6-dinitrotoluene	nd	79B	benzo(ghi)perylene	nd
37B	1,2-diphenylhydrazine (as azobenzene)	nd	80B	fluorene	nd
39B	fluoranthene	nd	81B	phenanthrene	nd
40B	4-chlorophenyl phenyl ether	nd	82B	dibenzo(a,h)anthracene	nd
			83B	indeno(1,2,3-cd)pyrene	nd
			84B	pyrene	nd

ANTHONY S. WONG, Ph.D.
VICE PRESIDENT

CHARLES J. SODERQUIST, Ph.D.
VICE PRESIDENT

RUBY A. ULRICH
SECRETARY/TREASURER

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

8113

PRIORITY POLLUTANT DATA SUMMARY SHEET

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15031-2

CLIENT I.D.: # 21 S

ACID COMPOUNDS		ug/L	BASE/NEUTRAL COMPOUNDS		ug/L
21A	2,4,6-trichlorophenol	ND	41B	4-bromophenyl phenyl ether	ND
22A	p-chloro-m-cresol	ND	42B	bis(2-chloroisopropyl)ether	ND
24A	2-chlorophenol	ND	43B	bis(2-chloroethoxy)methane	ND
31A	2,4-dichlorophenol	ND	52B	hexachlorobutadiene	ND
34A	2,4-dimethylphenol	ND	53B	hexachlorocyclopentadiene	ND
57A	2-nitrophenol	ND	54B	isophorone	ND
58A	4-nitrophenol	ND	55B	naphthalene	ND
59A	2,4-dinitrophenol	ND	56B	nitrobenzene	ND
60A	4,6-dinitro-o-cresol	ND	61B	N-nitrosodimethylamine	ND
64A	pentachlorophenol	ND	62B	N-nitrosodiphenylamine	ND
65A	phenol	ND	63B	N-nitrosodi-n-propylamine	ND
			66B	bis(2-ethylhexyl)phthalate	ND
			67B	butyl benzyl phthalate	ND
			68B	di-n-butyl phthalate	ND
			69B	di-n-octyl phthalate	ND
			70B	diethyl phthalate	ND
			71B	dimethyl phthalate	ND
			72B	benzo(a)anthracene	ND
			73B	benzo(a)pyrene	ND
			74B	3,4-benzofluoranthene	ND
			75B	benzo(k)fluoranthene	ND
			76B	chrysene	ND
			77B	acenaphthylene	ND
			78B	anthracene	ND
			79B	benzo(ghi)perylene	ND
			80B	fluorene	ND
			81B	phenanthrene	ND
			82B	dibenzo(a,h)anthracene	ND
			83B	indeno(1,2,3-cd)pyrene	ND
			84B	pyrene	ND

* - less than a detection limit of 10 ug/L

ND = not detected

PESTICIDE/HERBICIDE REPORT FORM

Sample ID

mw
215

ES ID

E2CEC4

6/15-E2

Aliquot analyzed

12

Date Received

6/29-E2

Detector Used:

Coulson, EC, Flame, PID

Date analyzed

Chemist

MB

Approved

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	0.049
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	0.011
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.122
2,4,5,T	0.001	0.087
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-304

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID 820929Well #215Aliquot analyzed 12Date Received 13 Aug 82Detector Used: Coulson, EC Flame, PIDDate analyzed 27 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	0.048
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	0.007
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

no identifiable
herbicides

AROCLOR (PCB) REPORT FORM

Sample ID Mc Clellan AFB

ES ID 820 829

MW # 21 5

Aliquot Analyzed 1L

Date Received 13 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 27 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFB
MW #215ES ID 820804

Aliquot analyzed _____

Date Received 24 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>FILE</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0014	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

6/7/82 *car. plw***California Analytical Laboratories, Inc.**5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105**PRIORITY POLLUTANT DATA SHEET**CLIENT Engineering ScienceCAL LAB NO. 14728-16CLIENT I.D. M.W. 225

<u>VOLATILES</u>		<u>ug/L or ug/Kg</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	8
88V	vinyl chloride	ND

ND = Not detected

2-309

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15031-3
CLIENT I.D.: #22 S

PP#	VOLATILES	ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	6 ✓
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	16 ✓
88V	vinyl chloride	ND

* less than 10ug/L

ND= not detected

COMMENTS:

6 July 1982

California Analytical Laboratories, Inc.

481 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-0802

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

14725-1

CLIENT I.D.

208 225

ACID COMPOUNDS

µg/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-o-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

18	acenaphthene	ND
58	benzidine	ND
88	1,2,4-trichlorobenzene	ND
98	hexachlorobenzene	ND
128	hexachloroethane	ND
188	bis(2-chloroethyl)ether	ND
208	2-chloronaphthalene	ND
258	1,2-dichlorobenzene	ND
268	1,3-dichlorobenzene	ND
278	1,4-dichlorobenzene	ND
288	3,3'-dichlorobenzidine	ND
358	2,4-dinitrotoluene	ND
368	2,6-dinitrotoluene	ND
378	1,2-diphenylhydrazine (as azobenzene)	ND
398	fluoranthene	ND
408	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

µg/L

418	4-bromophenyl phenyl ether	ND
428	bis(2-chloroisopropyl)ether	ND
438	bis(2-chloroethoxy)methane	ND
528	hexachlorobutadiene	ND
538	hexachlorocyclopentadiene	ND
548	isophorone	ND
558	naphthalene	ND
568	nitrobenzene	ND
618	N-nitrosodimethylamine	ND
628	N-nitrosodiphenylamine	ND
638	N-nitrosodi-n-propylamine	ND
668	bis(2-ethylhexyl)phthalate	ND
678	butyl benzyl phthalate	ND
688	di-n-butyl phthalate	ND
698	di-n-octyl phthalate	ND
708	diethyl phthalate	ND
718	dimethyl phthalate	ND
728	benzo(a)anthracene	ND
738	benzo(a)pyrene	ND
748	3,4-benzofluoranthene	ND
758	benzo(k)fluoranthene	ND
768	chrysene	ND
778	acenaphthylene	ND
788	anthracene	ND
798	benzo(ghi)perylene	ND
808	fluorene	ND
818	phenanthrene	ND
828	dibenzo(a,h)anthracene	ND
838	indeno(1,2,3-cd)pyrene	ND
848	pyrene	ND

CHARLES J. SODERQUIST, Ph.D.
VICE PRESIDENT

ANTHONY S. WONG, PH.D.
VICE PRESIDENT

RUBY A. ULRICH
SECRETARY/TREASURER

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-8105

8113

PRIORITY POLLUTANT DATA SUMMARY SHEET

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15031-3
CLIENT I.D.: #22 S ✓

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	15
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	ND
5B	berzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzene	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

ug/L

41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	9 ✓
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

* = less than a detection limit of 10 ug/L
ND = not detected

PESTICIDE/HERBICIDE REPORT FORM

Sample ID ^{m.w.} 10511 #225ES ID 9-207766/3-82Aliquot analyzed 12

Date Received _____

Detector Used: Coulson, EC Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	0.003
Gamma BHC (lindane)	0.002	0.064
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.026
2,4,5,T	0.001	0.003
2,4,5 TP (Silvex)	0.002	0.031
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-213

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McKellan AFBES ID 820931Neil # 225Aliquot analyzed 10Date Received 13 August 82Detector Used: Coulson, EC Flame, PIDDate analyzed 27 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	0.057
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DOD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

*no identifiable
herbicide peaks*

2-314

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB
MW # 225

ES ID 820931

Aliquot Analyzed 1L

Date Received 13 August 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 27 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFBES ID 222776MW #225

Aliquot analyzed _____

Date Received 8 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/l</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	0.03	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.18	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

4/29 10M PLW

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14532-11

CLIENT I.D. MW 235

VOLATILES		ug/L or ug/Kg
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15031-5
CLIENT I.D.: #23 S

PP#	<u>VOLATILES</u>	ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1,-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* less than 10ug/L
ND= not detected

COMMENTS:

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9822

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

14557-114B

CLIENT I.D.

MIL 235

ACID COMPOUNDS	µg/L
21A 2,4,6-trichlorophenol	<i>ND</i>
22A p-chloro-m-cresol	<i>ND</i>
24A 2-chlorophenol	<i>ND</i>
31A 2,4-dichlorophenol	<i>ND</i>
34A 2,4-dimethylphenol	<i>ND</i>
57A 2-nitrophenol	<i>ND</i>
58A 4-nitrophenol	<i>ND</i>
59A 2,4-dinitrophenol	<i>ND</i>
60A 4,6-dinitro-o-cresol	<i>ND</i>
64A pentachlorophenol	<i>ND</i>
65A phenol	<i>ND</i>

BASE/NEUTRAL COMPOUNDS	µg/L
18 acenaphthene	<i>ND</i>
58 benzidine	<i>ND</i>
88 1,2,4-trichlorobenzene	<i>ND</i>
98 hexachlorobenzene	<i>ND</i>
128 hexachloroethane	<i>ND</i>
188 bis(2-chloroethyl)ether	<i>ND</i>
208 2-chloronaphthalene	<i>ND</i>
258 1,2-dichlorobenzene	<i>ND</i>
268 1,3-dichlorobenzene	<i>ND</i>
278 1,4-dichlorobenzene	<i>ND</i>
288 3,3'-dichlorobenzidine	<i>ND</i>
358 2,4-dinitrotoluene	<i>ND</i>
368 2,6-dinitrotoluene	<i>ND</i>
378 1,2-diphenylhydrazine (as azobenzene)	<i>ND</i>
398 fluoranthene	<i>ND</i>
408 4-chlorophenyl phenyl ether	<i>ND</i>

BASE/NEUTRAL COMPOUNDS	µg/L
418 4-bromophenyl phenyl ether	<i>ND</i>
428 bis(2-chloroisopropyl)ether	<i>ND</i>
438 bis(2-chloroethoxy)methane	<i>ND</i>
528 hexachlorobutadiene	<i>ND</i>
538 hexachlorocyclopentadiene	<i>ND</i>
548 isophorone	<i>ND</i>
558 naphthalene	<i>ND</i>
568 nitrobenzene	<i>ND</i>
618 N-nitrosodimethylamine	<i>ND</i>
628 N-nitrosodiphenylamine	<i>ND</i>
638 N-nitrosodi-n-propylamine	<i>ND</i>
668 bis(2-ethylhexyl)phthalate	<i>ND</i>
678 butyl benzyl phthalate	<i>ND</i>
688 di-n-butyl phthalate	<i>ND</i>
698 di-n-octyl phthalate	<i>ND</i>
708 diethyl phthalate	<i>ND</i>
718 dimethyl phthalate	<i>ND</i>
728 benzo(a)anthracene	<i>ND</i>
738 benzo(a)pyrene	<i>ND</i>
748 3,4-benzofluoranthene	<i>ND</i>
758 benzo(k)fluoranthene	<i>ND</i>
768 chrysene	<i>ND</i>
778 acenaphthylene	<i>ND</i>
788 anthracene	<i>ND</i>
798 benzo(ghi)perylene	<i>ND</i>
808 fluorene	<i>ND</i>
818 phenanthrene	<i>ND</i>
828 dibenzo(a,h)anthracene	<i>ND</i>
838 indeno(1,2,3-cd)pyrene	<i>ND</i>
848 pyrene	<i>ND</i>

PAUL A. TAYLOR, Ph.D.
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VICE PRESIDENT

ANTHONY S. WONG, Ph.D.
VICE PRESIDENT

RUBY A. ULRICH
SECRETARY/TREASURER

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-8105

8/13

PRIORITY POLLUTANT DATA SUMMARY SHEET

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15031-5
CLIENT I.D.: # 23 S ✓

ACID COMPOUNDS		ug/L	BASE/NEUTRAL COMPOUNDS		ug/L
21A	2,4,6-trichlorophenol	ND	41B	4-bromophenyl phenyl ether	ND
22A	p-chloro-m-cresol	ND	42B	bis(2-chloroisopropyl)ether	ND
24A	2-chlorophenol	ND	43B	bis(2-chloroethoxy)methane	ND
31A	2,4-dichlorophenol	ND	52B	hexachlorobutadiene	ND
34A	2,4-dimethylphenol	ND	53B	hexachlorocyclopentadiene	ND
57A	2-nitrophenol	ND	54B	isophorone	ND
58A	4-nitrophenol	ND	55B	naphthalene	ND
59A	2,4-dinitrophenol	ND	56B	nitrobenzene	ND
60A	4,6-dinitro-o-cresol	ND	61B	N-nitrosodimethylamine	ND
64A	pentachlorophenol	ND	62B	N-nitrosodiphenylamine	ND
65A	phenol	ND	63B	N-nitrosodi-n-propylamine	ND
BASE/NEUTRAL COMPOUNDS			66B	bis(2-ethylhexyl)phthalate	ND
1B	acenaphthene	ND	67B	butyl benzyl phthalate	ND
5B	benzidine	ND	68B	di-n-butyl phthalate	ND
8B	1,2,4-trichlorobenzene	ND	69B	di-n-octyl phthalate	ND
9B	hexachlorobenzene	ND	70B	diethyl phthalate	ND
12B	hexachloroethane	ND	71B	dimethyl phthalate	ND
18B	bis(2-chloroethyl)ether	ND	72B	benzo(a)anthracene	ND
20B	2-chloronaphthalene	ND	73B	benzo(a)pyrene	ND
25B	1,2-dichlorobenzene	ND	74B	3,4-benzofluoranthene	ND
26B	1,3-dichlorobenzene	ND	75B	benzo(k)fluoranthene	ND
27B	1,4-dichlorobenzene	ND	76B	chrysene	ND
28B	3,3'-dichlorobenzene	ND	77B	acenaphthylene	ND
35B	2,4-dinitrotoluene	ND	78B	anthracene	ND
36B	2,6-dinitrotoluene	ND	79B	benzo(ghi)perylene	ND
37B	1,2-diphenylhydrazine	ND	80B	fluorene	ND
	(as azobenzene)	ND	81B	phenanthrene	ND
39B	fluoranthene	ND	82B	dibenzo(a,h)anthracene	ND
40B	4-chlorophenyl phenyl ether	ND	83B	indeno(1,2,3-cd)pyrene	ND
			84B	pyrene	ND

* = less than a detection limit of 10 ug/L

ND = not detected

PESTICIDE/HERBICIDE REPORT FORM

Sample ID MW 235

ES ID 820629

SAMPLE HELD PACT
EXPIRATION DATE

Aliquot analyzed 1L

Date Received 4/29-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 5/1/82

Chemist LJB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Well #235ES ID 820933McClellan AFBAliquot analyzed 12Date Received 13 August 82Detector Used: Coulson, EC Flame, PIDDate analyzed 31 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.034
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

no identifiable
herbicide peaks

AROCLOR (PCB) REPORT FORM

54

Sample ID McClellan AFG
MW #235

ES ID 820933

Aliquot Analyzed 12

Date Received 13 August 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 31 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFB
MW #235ES ID 0629

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>100/2</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.025	
Arsenic	p,h,c,d,o	—	10	0.30	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1 } total	1.04	
Chromium (+6)	c	—			
Cobalt		50	1		
Copper	p,c,d,o	20	1	0.33	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.026	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0009	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	0.41	
Potassium		10	—		
Selenium	p,h,c,d	—	10	0.057	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	40.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	11.4	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

4/28 sample

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO. 14545-1

CLIENT I.D.

MW 245

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

8/12
5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. #245

CAL LAB NO. 15023-2

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14575-1

CLIENT I.D. MW 245

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-o-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
18 acenaphthene	ND
58 benzidine	ND
88 1,2,4-trichlorobenzene	ND
98 hexachlorobenzene	ND
128 hexachloroethane	ND
188 bis(2-chloroethyl)ether	ND
208 2-chloronaphthalene	ND
258 1,2-dichlorobenzene	ND
268 1,3-dichlorobenzene	ND
278 1,4-dichlorobenzene	ND
288 3,3'-dichlorobenzidine	ND
358 2,4-dinitrotoluene	ND
368 2,6-dinitrotoluene	ND
378 1,2-diphenylhydrazine (as azobenzene)	ND
398 fluoranthene	ND
408 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
418 4-bromophenyl phenyl ether	ND
428 bis(2-chloroisopropyl)ether	ND
438 bis(2-chloroethoxy)methane	ND
528 hexachlorobutadiene	ND
538 hexachlorocyclopentadiene	ND
548 isophorone	ND
558 naphthalene	ND
568 nitrobenzene	ND
618 N-nitrosodimethylamine	ND
628 N-nitrosodiphenylamine	ND
638 N-nitrosodi-n-propylamine	ND
668 bis(2-ethylhexyl)phthalate	ND
678 butyl benzyl phthalate	ND
688 di-n-butyl phthalate	ND
698 di-n-octyl phthalate	ND
708 diethyl phthalate	ND
718 dimethyl phthalate	ND
728 benzo(a)anthracene	ND
738 benzo(a)pyrene	ND
748 3,4-benzofluoranthene	ND
758 benzo(k)fluoranthene	ND
768 chrysene	ND
778 acenaphthylene	ND
788 anthracene	ND
798 benzo(ghi)perylene	ND
808 fluorene	ND
818 phenanthrene	ND
828 dibenzo(a,h)anthracene	ND
838 indeno(1,2,3-cd)pyrene	ND
848 pyrene	ND

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

8/12

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15023-2

CLIENT I.D. 245 ✓

ACID COMPOUNDS

µg/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	260 ✓
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

µg/L

41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl)ether	ND
43B	bis(2-chloroethoxy)methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis(2-ethylhexyl)phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID MLC 245ES ID E20631Aliquot analyzed 12Date Received 4/29-57Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LHB

Approved _____

SAMPLE HELD PAST
EXPIRATION DATE

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McChellan AFBES ID E20935Well # 24SAliquot analyzed 12

Date Received _____

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	0.027
2,4,5 TP (Silvex)	0.002	
DCCP (Dibromochloro propane)		

no identifiable pesticide peaks

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 20925

MW #245

Aliquot Analyzed 12

Date Received _____

Detector Used: EC, Coulson, Flame, PID

Date Analyzed _____

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFB
MW#245ES ID 0631Date Received 29 April 1982

Aliquot analyzed _____

Date analyzed _____

Method Used _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>1000/2</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.008	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0016	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.04	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

6/16/84

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

14772-12

CLIENT I.D.

MW255

VOLATILES

ug/L

2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	50
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

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California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15023-3

CLIENT I.D. 255

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8822

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

147-72-12

CLIENT I.D.

MW255

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	nd
22A	p-chloro-o-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	nd
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS

18	acenaphthene	nd
58	benzidine	nd
88	1,2,4-trichlorobenzene	nd
98	hexachlorobenzene	nd
128	hexachloroethane	nd
188	bis(2-chloroethyl)ether	nd
208	2-chloronaphthalene	nd
258	1,2-dichlorobenzene	nd
268	1,3-dichlorobenzene	nd
278	1,4-dichlorobenzene	nd
288	3,3'-dichlorobenzidine	nd
358	2,4-dinitrotoluene	nd
368	2,6-dinitrotoluene	nd
378	1,2-diphenylhydrazine (as azobenzene)	nd
398	fluoranthene	nd
408	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS

ug/L

418	4-bromophenyl phenyl ether	nd
428	bis(2-chloroisopropyl)ether	nd
438	bis(2-chloroethoxy)methane	nd
528	hexachlorobutadiene	nd
538	hexachlorocyclopentadiene	nd
548	isophorone	nd
558	naphthalene	nd
568	nitrobenzene	nd
618	N-nitrosodimethylamine	nd
628	N-nitrosodiphenylamine	nd
638	N-nitrosodi-n-propylamine	nd
668	bis(2-ethylhexyl)phthalate	nd
678	butyl benzyl phthalate	nd
688	di-n-butyl phthalate	nd
698	di-n-octyl phthalate	nd
708	diethyl phthalate	nd
718	dimethyl phthalate	nd
728	benzo(a)anthracene	nd
738	benzo(a)pyrene	nd
748	3,4-benzofluoranthene	nd
758	benzo(k)fluoranthene	nd
768	chrysene	nd
778	acenaphthylene	nd
788	anthracene	nd
798	benzo(ghi)perylene	nd
808	fluorene	nd
818	phenanthrene	nd
828	dibenzo(a,h)anthracene	nd
838	indeno(1,2,3-cd)pyrene	nd
848	pyrene	nd

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

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PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15023-3

CLIENT I.D. 255 ✓

ACID COMPOUNDS	µg/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	µg/L
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	* ✓
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	µg/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	* ✓
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	* ✓
77B acenaphthylene	ND
78B anthracene	* ✓
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	* ✓
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	* ✓

PESTICIDE/HERBICIDE REPORT FORM

Sample ID ^{mw} 255ES ID 8207926/5-82Aliquot analyzed 12Date Received 6/24-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	0.32
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID W211 #255ES ID 620937US Celleran AFBAliquot analyzed 1.2Date Received 13 August 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 30 Aug 82Chemist HF

Approved _____

	Detection Limits(ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

*no identifiable pesticide peaks**no identifiable herbicide peaks*

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES. ID 820937

MW #255

Aliquot Analyzed 12

Date Received 13 August 1982

Detector Used: (EC) Coulson, Flame, PID

Date Analyzed 30 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFBES ID 820792MW #255

Aliquot analyzed _____

Date Received 24 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>MLA / R</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1 } total 10 }	<0.05	
Chromium (+6)	c	—			
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.032	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15015-3

CLIENT I.D.: 26S

PP#	<u>VOLATILES</u>	ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1,-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* less than 10ug/L

ND= not detected

COMMENTS:

California Analytical Laboratories, Inc.

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CHARLES J. SODERQUIST, Ph.D.
VICE PRESIDENT

ANTHONY S. WONG, Ph.D.
VICE PRESIDENT

RUBY A. ULRICH
SECRETARY/TREASURER

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-8105

8111

PRIORITY POLLUTANT DATA SUMMARY SHEET

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15015-3
CLIENT I.D.: WELL 26S

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzene	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

ug/L

41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl)ether	ND
43B	bis(2-chloroethoxy)methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis(2-ethylhexyl)phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

* = less than a detection limit of 10 ug/L
ND= not detected

PESTICIDE/HERBICIDE REPORT FORM

Sample ID HLK 265ES ID E20641Aliquot analyzed 12Date Received 4/20-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LIB

Approved _____

SAMPLE HELD PAST
EXPIRATION DATE

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

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PESTICIDE/HERBICIDE REPORT FORM

Sample ID ^{mw} 26-SES ID E2C7746/16-82Aliquot analyzed 1LDate Received 6/24-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	0.165
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.013
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	0.095
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.003
2,4,5,T	0.001	0.002
2,4,5 TP (Silvex)	0.002	0.004
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID E22939Well # 26SAliquot analyzed 12Date Received 13 August 1982Detector Used: Coulson, EC, Flame, PIDDate analyzed 30 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	0.035
Beta BHC	0.004	0.077
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.053
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	0.002
2,4,5 TP (Silvex)	0.002	
DCEP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB
MW # 265

ES ID 820939

Aliquot Analyzed 12

Date Received 13 August 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 30 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

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Sample ID McClellanES ID 820641MW #265

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.15	
Arsenic	p,h,c,d,o	—	10	1.00	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	0.132	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	Total 0.51	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	1.09	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.068	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	2.89	
Potassium		10	—		
Selenium	p,h,c,d	—	10	0.244	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	5.9	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

METALS REPORT FORM

Sample ID McClellan AFB
MW # 265ES ID 820794Date Received 24 June 1982

Aliquot analyzed _____

Date analyzed _____

Method Used _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>ppb/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

4/28 JMW

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering ScienceCAL LAB NO. 14545-4CLIENT I.D. MW 275

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

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California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. #275

CAL LAB NO. 15023-5

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	*✓
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	*✓
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	*✓
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	15✓
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8822

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

14595-4

CLIENT I.D.

MW 275

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

18	acenaphthene	ND
58	benzidine	ND
88	1,2,4-trichlorobenzene	ND
98	hexachlorobenzene	ND
128	hexachloroethane	ND
188	bis(2-chloroethyl)ether	ND
208	2-chloronaphthalene	ND
258	1,2-dichlorobenzene	ND
268	1,3-dichlorobenzene	ND
278	1,4-dichlorobenzene	ND
288	3,3'-dichlorobenzidine	ND
358	2,4-dinitrotoluene	ND
368	2,6-dinitrotoluene	ND
378	1,2-diphenylhydrazine (as azobenzene)	ND
398	fluoranthene	ND
408	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

ug/L

418	4-bromophenyl phenyl ether	ND
428	bis(2-chloroisopropyl)ether	ND
438	bis(2-chloroethoxy)methane	ND
528	hexachlorobutadiene	ND
538	hexachlorocyclopentadiene	ND
548	isophorone	ND
558	naphthalene	ND
568	nitrobenzene	ND
618	N-nitrosodimethylamine	ND
628	N-nitrosodiphenylamine	ND
638	N-nitrosodi-n-propylamine	ND
668	bis(2-ethylhexyl)phthalate	ND
678	butyl benzyl phthalate	ND
688	di-n-butyl phthalate	ND
698	di-n-octyl phthalate	ND
708	diethyl phthalate	ND
718	dimethyl phthalate	ND
728	benzo(a)anthracene	ND
738	benzo(a)pyrene	ND
748	3,4-benzofluoranthene	ND
758	benzo(k)fluoranthene	ND
768	chrysene	ND
778	acenaphthylene	ND
788	anthracene	ND
798	benzo(ghi)perylene	ND
808	fluorene	ND
818	phenanthrene	ND
828	dibenzo(a,h)anthracene	ND
838	indeno(1,2,3-cd)pyrene	ND
848	pyrene	ND

2-357

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

8/12

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15023-5

CLIENT I.D. Well 275

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	120 ✓
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID mw 275
6/16-82

ES ID 820796

Aliquot analyzed 1L

Date Received 6/24-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	4.95
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001) sample lost
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID WickellianES ID 82094HWell # 27SAliquot analyzed 12Date Received 13 August 1982Detector Used: Coulson, EC, Flame, PIDDate analyzed 31 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	0.002
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	0.002
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

no identifiable pesticide parts

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820941

MW #275

Aliquot Analyzed 12

Date Received 13 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 31 August 1982

Chemist HE

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFBES ID 820796MW #275

Aliquot analyzed _____

Date Received 24 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0017	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. MW28 S

CAL LAB NO. 14772-14

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

14772-14

CLIENT I.D.

mul 285

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	nd
22A	p-chloro-m-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	nd
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	nd
5B	benzidine	nd
8B	1,2,4-trichlorobenzene	nd
9B	hexachlorobenzene	nd
12B	hexachloroethane	nd
18B	bis(2-chloroethyl)ether	nd
20B	2-chloronaphthalene	nd
25B	1,2-dichlorobenzene	nd
26B	1,3-dichlorobenzene	nd
27B	1,4-dichlorobenzene	nd
28B	3,3'-dichlorobenzidine	nd
35B	2,4-dinitrotoluene	nd
36B	2,6-dinitrotoluene	nd
37B	1,2-diphenylhydrazine (as azobenzene)	nd
39B	fluoranthene	nd
40B	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS

ug/L

41B	4-bromophenyl phenyl ether	nd
42B	bis(2-chloroisopropyl)ether	nd
43B	bis(2-chloroethoxy)methane	nd
52B	bexachlorobutadiene	nd
53B	hexachlorocyclopentadiene	nd
54B	isophorone	nd
55B	naphthalene	nd
56B	nitrobenzene	nd
61B	N-nitrosodimethylamine	nd
62B	N-nitrosodiphenylamine	nd
63B	N-nitrosodi-n-propylamine	nd
66B	bis(2-ethylhexyl)phthalate	nd
67B	butyl benzyl phthalate	nd
68B	di-n-butyl phthalate	nd
69B	di-n-octyl phthalate	nd
70B	diethyl phthalate	nd
71B	dimethyl phthalate	nd
72B	benzo(a)anthracene	nd
73B	benzo(a)pyrene	nd
74B	3,4-benzofluoranthene	nd
75B	benzo(k)fluoranthene	nd
76B	chrysene	nd
77B	acenaphthylene	nd
78B	anthracene	nd
79B	benzo(ghi)perylene	nd
80B	fluorene	nd
81B	phenanthrene	nd
82B	dibenzo(a,h)anthracene	nd
83B	indeno(1,2,3-cd)pyrene	nd
84B	pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID mw 255ES ID 8207956/16-82Aliquot analyzed 12Date Received 6/24-82Detector Used: Coulson, EC Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	0.61
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	0.17
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.014
2,4,5,T	0.001	0.002
2,4,5 TP (Silvex)	0.002	
DCCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-346

METALS REPORT FORM

Sample ID McClellan AFB
MW #285ES ID 822795Date Received 24 June 1982

Aliquot analyzed _____

Date analyzed _____

Chemist _____

Method Used _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.052	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

4/29 12:15 PM

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. MW 295

CAL LAB NO. 14536-12

VOLATILES

ug/l or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

8/16

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6106

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-14

CLIENT I.D. Well 295

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	10
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 1-526-12

CLIENT I.D. Mu 295

ACID COMPOUNDS	µg/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	µg/L
18 acenaphthene	ND
58 benzidine	ND
88 1,2,4-trichlorobenzene	ND
98 hexachlorobenzene	ND
12B hexachloroethane	ND
188 bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	µg/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

3/16

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-14
CLIENT I.D. Well 295

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	16
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID 110295

ES ID E20620

Date Received 4/29-82

Aliquot analyzed 12

Date analyzed 5

Chemist LIB

Approved _____

Detector Used: Coulson, EC, Flame, PID

SAMPLE HELD FOR
EXPIRATION DATE

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID 82095EWell # 295Aliquot analyzed 1LDate Received 18 August, 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 30 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	1.54
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

no identifiable
herbicide peaks

2-375

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820958

MW # 295

Aliquot Analyzed 12

Date Received 18 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 30 August 1982

Chemist HE

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McKellan AFBES ID 0620MW #295

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>10.2 7.2</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.041	
Arsenic	p,h,c,d,o	—	10	0.55	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	0.08	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total 0.24	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	0.59	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	0.022	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0021	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	2.13	
Potassium		10	—		
Selenium	p,h,c,d	—	10	0.105	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	2.96	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

6/16 per-flu

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 361-6106

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science
MW30

CAL LAB NO. 14772-7

CLIENT I.D.

VOLATILES

ug/L

2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	2600
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

8/17
6885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. Well 305

CAL LAB NO. 15052-17

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	X
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	10
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14772-07

CLIENT I.D. MW30

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-o-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
54A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
18 acenaphthene	nd
58 benzidine	nd
88 1,2,4-trichlorobenzene	nd
98 hexachlorobenzene	nd
128 hexachloroethane	nd
188 bis(2-chloroethyl)ether	nd
208 2-chloronaphthalene	nd
258 1,2-dichlorobenzene	nd
268 1,3-dichlorobenzene	nd
278 1,4-dichlorobenzene	nd
288 3,3'-dichlorobenzidine	nd
358 2,4-dinitrotoluene	nd
368 2,6-dinitrotoluene	nd
378 1,2-diphenylhydrazine (as azobenzene)	nd
398 fluoranthene	nd
408 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
418 4-bromophenyl phenyl ether	nd
428 bis(2-chloroisopropyl)ether	nd
438 bis(2-chloroethoxy)methane	nd
528 hexachlorobutadiene	nd
538 hexachlorocyclopentadiene	nd
548 isophorone	nd
558 naphthalene	nd
568 nitrobenzene	nd
618 N-nitrosodimethylamine	nd
628 N-nitrosodiphenylamine	nd
638 N-nitrosodi-n-propylamine	nd
668 bis(2-ethylhexyl)phthalate	150
678 butyl benzyl phthalate	nd
688 di-n-butyl phthalate	nd
698 di-n-octyl phthalate	nd
708 diethyl phthalate	nd
718 dimethyl phthalate	nd
728 benzo(a)anthracene	nd
738 benzo(a)pyrene	nd
748 3,4-benzofluoranthene	nd
758 benzo(k)fluoranthene	nd
768 chrysene	nd
778 acenaphthylene	nd
788 anthracene	nd
798 benzo(ghi)perylene	nd
808 fluorene	nd
818 phenanthrene	nd
828 dibenzo(a,h)anthracene	nd
838 indeno(1,2,3-cd)pyrene	nd
848 pyrene	nd

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

8/17/82

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-17

CLIENT I.D. Well 308

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID mw 30ES ID EZCECZ6/16-EZAliquot analyzed 1LDate Received 6/24-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	0.041
Alpha BHC	0.002	
Beta BHC	0.004	0.007
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.063
2,4,5,T	0.001	0.029
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-383

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID 820960Well # 305Aliquot analyzed 12Date Received 18 August 1982Detector Used: Coulson, EC, Flame, PIDDate analyzed 1 Sept 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	0.018
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

no identifiable
herbicide peaks

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820960

MW # 30

Aliquot Analyzed 1L

Date Received 18 August 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 1 September 1982 Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

AD-A133 006

INSTALLATION RESTORATION PROGRAM PHASE II CONFIRMATION

5/8

MCCLELLAN AFB CALIFORNIA VOLUME 2(U)

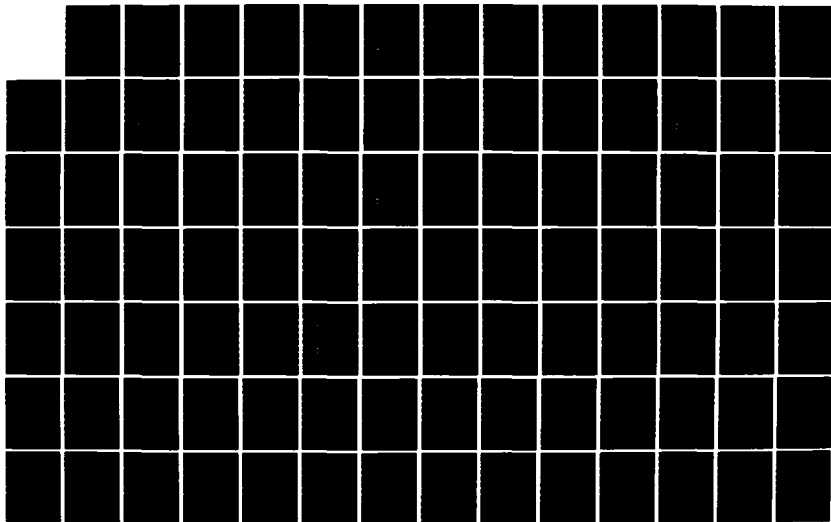
ENGINEERING-SCIENCE INC ARCADIA CALIF JUN 83

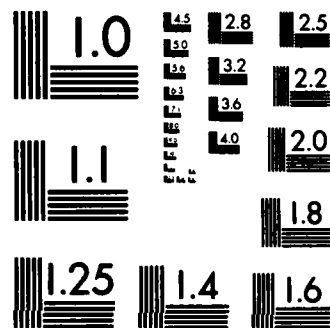
UNCLASSIFIED

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F/G 13/2

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

METALS REPORT FORM

Sample ID McStellan AFBES ID 820802MW #30

Aliquot analyzed _____

Date Received 24 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>File #</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1 } total 10 }	<0.05	
Chromium (+6)	c	—			
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0016	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

California Analytical Laboratories, Inc.

6/16 sample

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-8108

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. MW31

CAL LAB NO. 14772-11

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-8106

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. 10211 315

CAL LAB NO. 15052-18

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	* ✓
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	10
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14772-11

CLIENT I.D. MW31

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-o-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
8 acenaphthene	nd
58 benzidine	nd
88 1,2,4-trichlorobenzene	nd
98 hexachlorobenzene	nd
128 hexachloroethane	nd
188 bis(2-chloroethyl)ether	nd
208 2-chloronaphthalene	nd
258 1,2-dichlorobenzene	nd
268 1,3-dichlorobenzene	nd
278 1,4-dichlorobenzene	nd
288 3,3'-dichlorobenzidine	nd
358 2,4-dinitrotoluene	nd
368 2,6-dinitrotoluene	nd
378 1,2-diphenylhydrazine (as azobenzene)	nd
398 fluoranthene	nd
408 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
418 4-bromophenyl phenyl ether	nd
428 bis(2-chloroisopropyl)ether	nd
438 bis(2-chloroethoxy)methane	nd
528 hexachlorobutadiene	nd
538 hexachlorocyclopentadiene	nd
548 isophorone	nd
558 naphthalene	nd
568 nitrobenzene	nd
618 N-nitrosodimethylamine	nd
628 N-nitrosodiphenylamine	nd
638 N-nitrosodi-n-propylamine	nd
668 bis(2-ethylhexyl)phthalate	nd
678 butyl benzyl phthalate	nd
688 di-n-butyl phthalate	nd
698 di-n-octyl phthalate	nd
708 diethyl phthalate	nd
718 dimethyl phthalate	nd
728 benzo(a)anthracene	nd
738 benzo(a)pyrene	nd
748 3,4-benzofluoranthene	nd
758 benzo(k)fluoranthene	nd
768 chrysene	nd
778 acenaphthylene	nd
788 anthracene	nd
798 benzo(ghi)perylene	nd
808 fluorene	nd
818 phenanthrene	nd
828 dibenzo(a,h)anthracene	nd
838 indeno(1,2,3-cd)pyrene	nd
848 pyrene	nd

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

8/17/82

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-18

CLIENT I.D. Well 313

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID mw 31ES ID 9308054/15-82Aliquot analyzed 12.Date Received 4/20-82Detector Used: Coulson, EC Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.005	2.53
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClintock AFBES ID 820961Net # 315Aliquot analyzed 12Date Received 12 August 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 27 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	0.024
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.0085
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	0.011
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	0.003
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID Mc Clellan AFB

ES ID 820961

MW #31

Aliquot Analyzed 1L

Date Received 18 August 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 27 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFB
MW # 31ES ID 820805Date Received 24 June 1982

Aliquot analyzed _____

Date analyzed _____

Chemist _____

Method Used _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1 } total 10 }	<0.05	
Chromium (+6)	c	—			
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0017	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

STAGE I DEEP WELLS

6/16/2006

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET jfk

CLIENT Engineering ScienceCAL LAB NO. 14772-4CLIENT I.D. MWIBD

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. Well 16D

CAL LAB NO. 15052-13

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	* / ND
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-0802

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

14772-4

CLIENT I.D.

MW16D

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	nd
22A	p-chloro-o-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	nd
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS

18	acenaphthene	nd
58	benzidine	nd
88	1,2,4-trichlorobenzene	nd
98	hexachlorobenzene	nd
128	hexachloroethane	nd
188	bis(2-chloroethyl)ether	nd
208	2-chloronaphthalene	nd
258	1,2-dichlorobenzene	nd
268	1,3-dichlorobenzene	nd
278	1,4-dichlorobenzene	nd
288	3,3'-dichlorobenzidine	nd
358	2,4-dinitrotoluene	nd
368	2,6-dinitrotoluene	nd
378	1,2-diphenylhydrazine (as azobenzene)	nd
398	fluoranthene	nd
408	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS

ug/L

418	4-bromophenyl phenyl ether	nd
428	bis(2-chloroisopropyl)ether	nd
438	bis(2-chloroethoxy)methane	nd
528	hexachlorobutadiene	nd
538	hexachlorocyclopentadiene	nd
548	isophorone	nd
558	naphthalene	nd
568	nitrobenzene	nd
618	N-nitrosodimethylamine	nd
628	N-nitrosodiphenylamine	nd
638	N-nitrosodi-n-propylamine	nd
668	bis(2-ethylhexyl)phthalate	nd
678	butyl benzyl phthalate	nd
688	di-n-butyl phthalate	nd
698	di-n-octyl phthalate	nd
708	diethyl phthalate	nd
718	dimethyl phthalate	nd
728	benzo(a)anthracene	nd
738	benzo(a)pyrene	nd
748	3,4-benzofluoranthene	nd
758	benzo(k)fluoranthene	nd
768	chrysene	nd
778	acenaphthylene	nd
788	anthracene	nd
798	benzo(ghi)perylene	nd
808	fluorene	nd
818	phenanthrene	nd
828	dibenzo(a,h)anthracene	nd
838	indeno(1,2,3-cd)pyrene	nd
848	pyrene	nd

California Analytical Laboratories, Inc.

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8/11

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-13

CLIENT I.D. Well 16D ✓

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID

NW
16D

ES ID E20793

6/16-82

Aliquot analyzed 12

Date Received 6/24-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed

Chemist LB

Approved

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	0.005
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	0.008
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.002
2,4,5,T	0.001	0.037
2,4,5 TP (Silvex)	0.002	0.000
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID USC 11611 AFBES ID 820950Well # 16DAliquot analyzed 12Date Received 18 August 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 26 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

*no identifiable peaks**no identifiable peaks*

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-403

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820850

mw #160

Aliquot Analyzed 1L

Date Received 18 August 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 26 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFB
MW #160ES ID 820793Date Received 24 June 1982

Aliquot analyzed _____

Date analyzed _____

Method Used _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

6/16 sample

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. MW17DCAL LAB NO. 14772-3

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6106

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. Well 17D

CAL LAB NO. 15052-7

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-2827

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14772-03

CLIENT I.D. MW17D

ACID COMPOUNDS		ug/L
21A	2,4,6-trichlorophenol	nd
22A	p-chloro-m-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	nd
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS		ug/L
18	acenaphthene	nd
58	benzidine	nd
88	1,2,4-trichlorobenzene	nd
98	hexachlorobenzene	nd
128	hexachloroethane	nd
188	bis(2-chloroethyl)ether	nd
208	2-chloronaphthalene	nd
258	1,2-dichlorobenzene	nd
268	1,3-dichlorobenzene	nd
278	1,4-dichlorobenzene	nd
288	3,3'-dichlorobenzidine	nd
358	2,4-dinitrotoluene	nd
368	2,6-dinitrotoluene	nd
378	1,2-diphenylhydrazine (as azobenzene)	nd
398	fluoranthene	nd
408	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS		ug/L
418	4-bromophenyl phenyl ether	nd
428	bis(2-chloroisopropyl)ether	nd
438	bis(2-chloroethoxy)methane	nd
528	bexachlorobutadiene	nd
538	hexachlorocyclopentadiene	nd
548	isophorone	nd
558	naphthalene	nd
568	nitrobenzene	nd
618	N-nitrosodimethylamine	nd
628	N-nitrosodiphenylamine	nd
638	N-nitrosodi-n-propylamine	nd
668	bis(2-ethylhexyl)phthalate	nd
678	butyl benzyl phthalate	nd
688	di-n-butyl phthalate	nd
698	di-n-octyl phthalate	nd
708	diethyl phthalate	nd
718	dimethyl phthalate	nd
728	benzo(a)anthracene	nd
738	benzo(a)pyrene	nd
748	3,4-benzofluoranthene	nd
758	benzo(k)fluoranthene	nd
768	chrysene	nd
778	acenaphthylene	nd
788	anthracene	nd
798	benzo(ghi)perylene	nd
808	fluorene	nd
818	phenanthrene	nd
828	dibenzo(a,h)anthracene	nd
838	indeno(1,2,3-cd)pyrene	nd
848	pyrene	nd

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

8/17

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-7

CLIENT I.D. Well 17D ✓

ACID COMPOUNDS

µg/L

21A	2,4,6-trichlorophenol	nd
22A	p-chloro-m-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	nd
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	nd
5B	benzidine	nd
8B	1,2,4-trichlorobenzene	nd
9B	hexachlorobenzene	nd
12B	hexachloroethane	nd
18B	bis(2-chloroethyl)ether	nd
20B	2-chloronaphthalene	nd
25B	1,2-dichlorobenzene	nd
26B	1,3-dichlorobenzene	nd
27B	1,4-dichlorobenzene	nd
28B	3,3'-dichlorobenzidine	nd
35B	2,4-dinitrotoluene	nd
36B	2,6-dinitrotoluene	nd
37B	1,2-diphenylhydrazine (as azobenzene)	nd
39B	fluoranthene	nd
40B	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS

µg/L

41B	4-bromophenyl phenyl ether	nd
42B	bis(2-chloroisopropyl)ether	nd
43B	bis(2-chloroethoxy)methane	nd
52B	hexachlorobutadiene	nd
53B	hexachlorocyclopentadiene	nd
54B	isophorone	nd
55B	naphthalene	nd
56B	nitrobenzene	nd
61B	N-nitrosodimethylamine	nd
62B	N-nitrosodiphenylamine	nd
63B	N-nitrosodi-n-propylamine	nd
66B	bis(2-ethylhexyl)phthalate	nd
67B	butyl benzyl phthalate	nd
68B	di-n-butyl phthalate	nd
69B	di-n-octyl phthalate	nd
70B	diethyl phthalate	nd
71B	dimethyl phthalate	nd
72B	benzo(a)anthracene	nd
73B	benzo(a)pyrene	nd
74B	3,4-benzofluoranthene	nd
75B	benzo(k)fluoranthene	nd
76B	chrysene	nd
77B	acenaphthylene	nd
78B	anthracene	nd
79B	benzo(ghi)perylene	nd
80B	fluorene	nd
81B	phenanthrene	nd
82B	dibenzo(a,h)anthracene	nd
83B	indeno(1,2,3-cd)pyrene	nd
84B	pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID ^{mw} 17DES ID FZC 7976/15-82Aliquot analyzed 12Date Received 6/24-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.099
2,4,5,T	0.001	0.032
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID USCIRKIN AFBES ID E20952Well # 17 DAliquot analyzed 12Date Received 18 August, 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 26 Aug 82Chemist HE

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

*no identifiable peaks**no identifiable peaks*

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-412

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820952

MW #170

Aliquot Analyzed 1L

Date Received 18 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 26 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID Mc Clellan AFBES ID 820797MW #170

Aliquot analyzed _____

Date Received 24 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>File #</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0009	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

July 21, 1982

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Sciences
CLIENT I.D. MWIRD

CAL LAB NO. 14772-1

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

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6885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. 18D

CAL LAB NO. 15052-9

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

2-417

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

14772-1

CLIENT I.D.

MW18D

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	nd
22A	p-chloro-o-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	nd
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS

8	acenaphthene	nd
58	benzidine	nd
88	1,2,4-trichlorobenzene	nd
98	hexachlorobenzene	nd
128	hexachloroethane	nd
188	bis(2-chloroethyl)ether	nd
208	2-chloronaphthalene	nd
258	1,2-dichlorobenzene	nd
268	1,3-dichlorobenzene	nd
278	1,4-dichlorobenzene	nd
288	3,3'-dichlorobenzidine	nd
358	2,4-dinitrotoluene	nd
368	2,6-dinitrotoluene	nd
378	1,2-diphenylhydrazine (as azobenzene)	nd
398	fluoranthene	nd
408	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS

ug/L

418	4-bromophenyl phenyl ether	nd
428	bis(2-chloroisopropyl)ether	nd
438	bis(2-chloroethoxy)methane	nd
528	hexachlorobutadiene	nd
538	hexachlorocyclopentadiene	nd
548	isophorone	nd
558	naphthalene	nd
568	nitrobenzene	nd
618	N-nitrosodimethylamine	nd
628	N-nitrosodiphenylamine	nd
638	N-nitrosodi-n-propylamine	nd
668	bis(2-ethylhexyl)phthalate	nd
678	butyl benzyl phthalate	nd
688	di-n-butyl phthalate	nd
698	di-n-octyl phthalate	nd
708	diethyl phthalate	nd
718	dimethyl phthalate	nd
728	benzo(a)anthracene	nd
738	benzo(a)pyrene	nd
748	3,4-benzofluoranthene	nd
758	benzo(k)fluoranthene	nd
768	chrysene	nd
778	acenaphthylene	nd
788	anthracene	nd
798	benzo(ghi)perylene	nd
808	fluorene	nd
818	phenanthrene	nd
828	dibenzo(a,h)anthracene	nd
838	indeno(1,2,3-cd)pyrene	nd
848	pyrene	nd

California Analytical Laboratories, Inc.

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(916) 381-5105

8/116

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-9

CLIENT I.D. Well 18D

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	12
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID 15D

ES ID 820900

6/5-82

Aliquot analyzed 12

Date Received 6/24-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	0.01
Alpha BHC	0.002	
Beta BHC	0.004	0.005
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	0.017
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.122
2,4,5,T	0.001	0.022
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID 820954Well # EDAliquot analyzed 12Date Received 18 August, 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 26 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

no identifiable peaks

no identifiable
herbicide peaks

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-421

AROCLOR (PCB) REPORT FORM

Sample ID Mc Clellan AFB

ES ID 820954

MW #180

Aliquot Analyzed 1L

Date Received 12 August 82

Detector Used: ED, Coulson, Flame, PID

Date Analyzed 26 August 82

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFBES ID 820800DD# 180

Aliquot analyzed _____

Date Received 24 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected mg/L	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c				
Cadmium	p,h,c,d,o	5	0.1	0.09	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0014	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

4/29 sample

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14532-4

CLIENT I.D. MW 19 D

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

2-425

California Analytical Laboratories, Inc.

8/16
5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. Well 19D

CAL LAB NO. 15052-12

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

2-426

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

4/29 sample

CLIENT Engineering Science

CAL LAB NO. 14556-4

CLIENT I.D. MW19D

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-8105

8/16

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-12

CLIENT I.D. Well 19D ✓

ACID COMPOUNDS		ug/L
21A	2,4,6-trichlorophenol	nd
22A	p-chloro-m-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	nd
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS		
1B	acenaphthene	nd
5B	benzidine	nd
8B	1,2,4-trichlorobenzene	* ✓
9B	hexachlorobenzene	nd
12B	hexachloroethane	nd
18B	bis(2-chloroethyl)ether	nd
20B	2-chloronaphthalene	nd
25B	1,2-dichlorobenzene	nd
26B	1,3-dichlorobenzene	nd
27B	1,4-dichlorobenzene	nd
28B	3,3'-dichlorobenzidine	nd
35B	2,4-dinitrotoluene	nd
36B	2,6-dinitrotoluene	nd
37B	1,2-diphenylhydrazine (as azobenzene)	nd
39B	fluoranthene	nd
40B	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS		ug/L
41B	4-bromophenyl phenyl ether	nd
42B	bis(2-chloroisopropyl)ether	nd
43B	bis(2-chloroethoxy)methane	nd
52B	hexachlorobutadiene	nd
53B	hexachlorocyclopentadiene	nd
54B	isophorone	nd
55B	naphthalene	nd
56B	nitrobenzene	nd
61B	N-nitrosodimethylamine	nd
62B	N-nitrosodiphenylamine	nd
63B	N-nitrosodi-n-propylamine	nd
66B	bis(2-ethylhexyl)phthalate	*
67B	butyl benzyl phthalate	nd
68B	di-n-butyl phthalate	nd
69B	di-n-octyl phthalate	nd
70B	diethyl phthalate	nd
71B	dimethyl phthalate	nd
72B	benzo(a)anthracene	nd
73B	benzo(a)pyrene	nd
74B	3,4-benzofluoranthene	nd
75B	benzo(k)fluoranthene	nd
76B	chrysene	nd
77B	acenaphthylene	nd
78B	anthracene	nd
79B	benzo(ghi)perylene	nd
80B	fluorene	nd
81B	phenanthrene	nd
82B	dibenzo(a,h)anthracene	nd
83B	indeno(1,2,3-cd)pyrene	nd
84B	pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID MU 19DES ID 526623Aliquot analyzed 1LDate Received 4/29-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LIB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.00E
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	0.003
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID 820956Well # 19DAliquot analyzed 12.Date Received 15 August, 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 26 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	<u>2.006</u>
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	<u>2.004</u>
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

no identifiable
herbicide prats

2-430

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820956

mw # 190

Aliquot Analyzed 1L

Date Received 18 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 26 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFBES ID 0623M/W #190

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.013	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.13	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

4/29 sample

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. MW 20 D

CAL LAB NO. 14556-5

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15015-2
CLIENT I.D.: 20D FROM PUMP

PP#	VOLATILES	ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	* ✓
13V	1,1,-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* less than 10ug/L

ND= not detected

COMMENTS:

California Analytical Laboratories, Inc.

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California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

4/29 1207-PLW

CLIENT Engineering Science

CAL LAB NO. 14556-5

CLIENT I.D. MW 20 D

<u>ACID COMPOUNDS</u>		<u>ug/L</u>
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

<u>BASE/NEUTRAL COMPOUNDS</u>		
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

<u>BASE/NEUTRAL COMPOUNDS</u>		<u>ug/L</u>
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl)ether	ND
43B	bis(2-chloroethoxy)methane	ND
52B	bexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis(2-ethylhexyl)phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

2-436

PAUL A. TAYLOR, Ph.D.
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VICE PRESIDENT

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SECRETARY/TREASURER

California Analytical Laboratories, Inc.

3885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-8108

8/11

PRIORITY POLLUTANT DATA SUMMARY SHEET

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15015-2
CLIENT I.D.: WELL 20D ✓

ACID COMPOUNDS		ug/L	BASE/NEUTRAL COMPOUNDS		ug/L
21A 2,4,6-trichlorophenol		ND	41B 4-bromophenyl phenyl ether		ND
22A p-chloro-m-cresol		ND	42B bis(2-chloroisopropyl)ether		ND
24A 2-chlorophenol		ND	43B bis(2-chloroethoxy)methane		ND
31A 2,4-dichlorophenol		ND	52B hexachlorobutadiene		ND
34A 2,4-dimethylphenol		ND	53B hexachlorocyclopentadiene		ND
57A 2-nitrophenol		ND	54B isophorone		ND
58A 4-nitrophenol		ND	55B naphthalene		ND
59A 2,4-dinitrophenol		ND	56B nitrobenzene		ND
60A 4,6-dinitro-o-cresol		ND	61B N-nitrosodimethylamine		ND
64A pentachlorophenol		ND	62B N-nitrosodiphenylamine		ND
65A phenol		ND	63B N-nitrosodi-n-propylamine		ND
BASE/NEUTRAL COMPOUNDS			66B bis(2-ethylhexyl)phthalate		ND
1B acenaphthene		ND	67B butyl benzyl phthalate		ND
5B benzidine		ND	68B di-n-butyl phthalate		ND
8B 1,2,4-trichlorobenzene		*	69B di-n-octyl phthalate		ND
9B hexachlorobenzene		ND	70B diethyl phthalate		ND
12B hexachloroethane		ND	71B dimethyl phthalate		ND
18B bis(2-chloroethyl)ether		ND	72B benzo(a)anthracene		ND
20B 2-chloronaphthalene		ND	73B benzo(a)pyrene		ND
25B 1,2-dichlorobenzene		ND	74B 3,4-benzofluoranthene		ND
26B 1,3-dichlorobenzene		ND	75B benzo(k)fluoranthene		ND
27B 1,4-dichlorobenzene		ND	76B chrysene		ND
28B 3,3'-dichlorobenzene		ND	77B acenaphthylene		ND
35B 2,4-dinitrotoluene		ND	78B anthracene		*
36B 2,6-dinitrotoluene		ND	79B benzo(ghi)perylene		ND
37B 1,2-diphenylhydrazine		ND	80B fluorene		ND
(as azobenzene)		ND	81B phenanthrene		ND
39B fluoranthene		ND	82B dibenzo(a,h)anthracene		ND
40B 4-chlorophenyl phenyl ether		ND	83B indeno(1,2,3-cd)pyrene		ND
			84B pyrene		ND

* = less than a detection limit of 10 ug/L
ND= not detected

PESTICIDE/HERBICIDE REPORT FORM

Sample ID MLC 25DES ID 830632Aliquot analyzed 12Date Received 4/29-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LIB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-438

PESTICIDE/HERBICIDE REPORT FORM

Sample ID M^c Clellan AFBES ID 82C924Neil #20DAliquot analyzed 12.Date Received 11 AUG 82Detector Used: Coulson, EC Flame, PIDDate analyzed 26 Aug 82Chemist HF

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DECP (Dibromochloro propane)		

*no identifiable peaks**no identifiable
herbicide peaks*

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID Mc Clellan AFB

ES ID 820924

MW # 200

Aliquot Analyzed 1L

Date Received 11 August 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 26 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFBES ID 0632MW # 200

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.05	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

6/16 sample

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. MW21DCAL LAB NO. 14772-10

VOLATILES		ug/L
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L

ND = Not detected

2-443

8/13

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15031-1
CLIENT I.D.: #21 D

PP#	<u>VOLATILES</u>	ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* less than 10ug/L

ND= not detected

COMMENTS:

California Analytical Laboratories, Inc.

2-444

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95811
(916) 444-8807

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14732-10

CLIENT I.D. MW 21D

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-o-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
18 acenaphthene	nd
58 benzidine	nd
88 1,2,4-trichlorobenzene	nd
98 hexachlorobenzene	nd
128 hexachloroethane	nd
188 bis(2-chloroethyl)ether	nd
208 2-chloronaphthalene	nd
258 1,2-dichlorobenzene	nd
268 1,3-dichlorobenzene	nd
278 1,4-dichlorobenzene	nd
288 3,3'-dichlorobenzidine	nd
358 2,4-dinitrotoluene	nd
368 2,6-dinitrotoluene	nd
378 1,2-diphenylhydrazine (as azobenzene)	nd
398 fluoranthene	nd
408 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
418 4-bromophenyl phenyl ether	nd
428 bis(2-chloroisopropyl)ether	nd
438 bis(2-chloroethoxy)methane	nd
528 hexachlorobutadiene	nd
538 hexachlorocyclopentadiene	nd
548 isophorone	nd
558 naphthalene	nd
568 nitrobenzene	nd
618 N-nitrosodimethylamine	nd
628 N-nitrosodiphenylamine	nd
638 N-nitrosodi-n-propylamine	nd
668 bis(2-ethylhexyl)phthalate	nd
678 butyl benzyl phthalate	nd
688 di-n-butyl phthalate	nd
698 di-n-octyl phthalate	nd
708 diethyl phthalate	nd
718 dimethyl phthalate	nd
728 benzo(a)anthracene	nd
738 benzo(a)pyrene	nd
748 3,4-benzofluoranthene	nd
758 benzo(k)fluoranthene	nd
768 chrysene	nd
778 acenaphthylene	nd
788 anthracene	nd
798 benzo(ghi)perylene	nd
808 fluorene	nd
818 phenanthrene	nd
828 dibenzo(a,h)anthracene	nd
838 indeno(1,2,3-cd)pyrene	nd
848 pyrene	nd

PAUL A. TAYLOR, Ph.D.
PRESIDENT

ANTHONY S. WONG, Ph.D.
VICE PRESIDENT

CHARLES J. SODERQUIST, Ph.D.
VICE PRESIDENT

RUBY A. ULRICH
SECRETARY/TREASURER

California Analytical Laboratories, Inc.

3885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

8/13

PRIORITY POLLUTANT DATA SUMMARY SHEET

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15031-1
CLIENT I.D.: #21 D ✓

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	ug/L
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	*
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzene	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

* = less than a detection limit of 10 ug/L
ND = not detected

2-446

PESTICIDE/HERBICIDE REPORT FORM

Sample ID ^{mw} 21DES ID 8207916/15-82Aliquot analyzed 12

Date Received _____

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LIB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	0.012
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	0.008
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.175
2,4,5,T	0.001	0.044
2,4,5 TP (Silvex)	0.002	0.42
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-447

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID E2092E9Well # 21 DAliquot analyzed 12Date Received 13 Aug 82Detector Used: Coulson, EC Flame, PIDDate analyzed 26 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DOD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	<u><.001</u>
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

no identifiable peaks

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-448

AROCLOR (PCB) REPORT FORM

Sample ID Mc Clellan AFB

ES ID 820928a

MW #210

Aliquot Analyzed 12

Date Received 13 August 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 26 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFB
MU #21 DES ID 820791Date Received 24 June 1982

Aliquot analyzed _____

Date analyzed _____

Chemist _____

Method Used _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} Total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h;c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.02	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

4/29 sample

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14536-8

CLIENT I.D. MW 22 D

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

2-452

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15031-4
CLIENT I.D.: #22 D

5 2

PP#	<u>VOLATILES</u>	ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1,-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* less than 10ug/L
ND= not detected

COMMENTS:

2-452

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14556-8

CLIENT I.D. MW 22D

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

PAUL A. TAYLOR, Ph.D.
PRESIDENT

ANTHONY S. WONG, Ph.D.
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CHARLES J. SOOERQUIST, Ph.D.
VICE PRESIDENT

RUBY A. ULRICH
SECRETARY/TREASURER

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

8/13

PRIORITY POLLUTANT DATA SUMMARY SHEET

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15031-4
CLIENT I.D.: # 22 D ✓

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	ug/L
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	* ✓
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzene	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

* = less than a detection limit of 10 ug/L
ND = not detected

PESTICIDE/HERBICIDE REPORT FORM

Sample ID 11422DES ID 820624Aliquot analyzed 1LDate Received 4/29-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFB

ES ID 820930

Well # 22 D

Aliquot analyzed 12

Date Received 13 Aug 82

Detector Used: Coulson, EC Flame, PID

Date analyzed 27 Aug 82

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	0.0039
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

no identifiable
herbicide peaks

2-457

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

RS ID 820930

MW 432 D

Aliquot Analyzed 12

Date Received 13 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 27 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID MC Stellan AFBES ID 0624MW # 220

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>ppb/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total 0.84	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	2.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.16	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

4/29/2001

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14532 - 10

CLIENT I.D. MW 230

VOLATILES

ug/l or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

2-461

8/13

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15031-6

CLIENT I.D.: #23 D

PP#	<u>VOLATILES</u>	ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1,-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* less than 10ug/L

ND= not detected

COMMENTS:

2-462

California Analytical Laboratories, Inc.

4/29 sample

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

14556-10

CLIENT I.D.

MW 23D

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

ug/L

41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl)ether	ND
43B	bis(2-chloroethoxy)methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis(2-ethylhexyl)phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

ANTHONY S WONG, Ph D
VICE PRESIDENT

RUBY A. ULRICH
SECRETARY/TREASURER

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

8/13

CAL LAB NO. 15031-6
CLIENT I.D.: # 23 D ✓

ACID COMPOUNDS	ug/L	BASE/NEUTRAL COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND	41B 4-bromophenyl phenyl ether	ND
22A p-chloro-m-cresol	ND	42B bis(2-chloroisopropyl)ether	ND
24A 2-chlorophenol	ND	43B bis(2-chloroethoxy)methane	ND
31A 2,4-dichlorophenol	ND	52B hexachlorobutadiene	ND
34A 2,4-dimethylphenol	ND	53B hexachlorocyclopentadiene	ND
57A 2-nitrophenol	ND	54B isophorone	ND
58A 4-nitrophenol	ND	55B naphthalene	ND
59A 2,4-dinitrophenol	ND	56B nitrobenzene	ND
60A 4,6-dinitro-o-cresol	ND	61B N-nitrosodimethylamine	ND
64A pentachlorophenol	ND	62B N-nitrosodiphenylamine	ND
65A phenol	ND	63B N-nitrosodi-n-propylamine	ND
		66B bis(2-ethylhexyl)phthalate	ND
BASE/NEUTRAL COMPOUNDS		67B butyl benzyl phthalate	ND
1B acenaphthene	ND	68B di-n-butyl phthalate	ND
5B benzidine	ND	69B di-n-octyl phthalate	ND
8B 1,2,4-trichlorobenzene	* ✓	70B diethyl phthalate	ND
9B hexachlorobenzene	ND	71B dimethyl phthalate	ND
12B hexachloroethane	ND	72B benzo(a)anthracene	ND
18B bis(2-chloroethyl)ether	ND	73B benzo(a)pyrene	ND
20B 2-chloronaphthalene	ND	74B 3,4-benzofluoranthene	ND
25B 1,2-dichlorobenzene	ND	75B benzo(k)fluoranthene	ND
26B 1,3-dichlorobenzene	ND	76B chrysene	ND
27B 1,4-dichlorobenzene	ND	77B acenaphthylene	ND
28B 3,3'-dichlorobenzene	ND	78B anthracene	ND
35B 2,4-dinitrotoluene	ND	79B benzo(ghi)perylene	ND
36B 2,6-dinitrotoluene	ND	80B fluorene	ND
37B 1,2-diphenylhydrazine	ND	81B phenanthrene	ND
(as azobenzene)	ND	82B dibenzo(a,h)anthracene	ND
39B fluoranthene	ND	83B indeno(1,2,3-cd)pyrene	ND
40B 4-chlorophenyl phenyl ether	ND	84B pyrene	ND

2-464

PESTICIDE/HERBICIDE REPORT FORM

Sample ID MLU 23DES ID 820625Aliquot analyzed 12Date Received 4-29-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LIB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-465

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Well # 23DES ID 820932McClellan AFBAliquot analyzed 12Date Received 13 August 82Detector Used: Coulson, EC Flame, PIDDate analyzed 27 Aug 82Chemist MF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	0.0018
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.039
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silver)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

*no identifiable
herbicide peaks*

2-466

AROCLOR (PCB) REPORT FORM

Sample ID Mc Clellan AFB
MW #230

ES ID 820932

Aliquot Analyzed 12

Date Received 13 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 27 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFBES ID 0625M/D # 230

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <i>mg/g</i>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.001	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<0.05	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

4/28/82 JDM:FLW

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science CAL LAB NO. 14545-2
CLIENT I.D. MW 24 D

VOLATILES		ug/L or ug/Kg
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

2-469

California Analytical Laboratories, Inc.

8/12

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15023-1

CLIENT I.D. #24 D

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

2-470-

28 May 1982

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14545-2

CLIENT I.D. ML-4A

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

8/12

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15023-1

CLIENT I.D. Well 24D ✓

ACID COMPOUNDS

µg/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

µg/L

41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl)ether	ND
43B	bis(2-chloroethoxy)methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis(2-ethylhexyl)phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	* ✓
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID NW 240ES ID 820623Aliquot analyzed 12Date Received 4/29/82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.009
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	0.60
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-472

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID E20934Well # 24DAliquots analyzed 12Date Received 13 August 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 27 Aug 82Chemist HE

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	0.005
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

no identifiable peaks

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

5

Sample ID Mc Clellan AFB

ES ID 820934

MW #240

Aliquot Analyzed 1L

Date Received 13 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 27 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

2-474

METALS REPORT FORM

Sample ID Mc Clellan AFB
MW #24DES ID 0628Date Received 29 April 1982

Aliquot analyzed _____

Date analyzed _____

Method Used _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/L</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	---	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	---		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	---	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	---		
Magnesium		1	---		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	---	0.5	0.0008	
Molybdenum	c	500	---		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	---		
Selenium	p,h,c,d	---	10	<0.01	
Silicon		10	---		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	40.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.14	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-8105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. MW25D

CAL LAB NO. 14772-9

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. 25D

CAL LAB NO. 15023-4

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	*✓
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	*✓
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14772-9

CLIENT I.D. NW25D

ACID COMPOUNDS		µg/L
21A	2,4,6-trichlorophenol	nd
22A	p-chloro-o-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	nd
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS		µg/L
18	acenaphthene	nd
58	benzidine	nd
88	1,2,4-trichlorobenzene	nd
98	hexachlorobenzene	nd
128	hexachloroethane	nd
188	bis(2-chloroethyl)ether	nd
208	2-chloronaphthalene	nd
258	1,2-dichlorobenzene	nd
268	1,3-dichlorobenzene	nd
278	1,4-dichlorobenzene	nd
288	3,3'-dichlorobenzidine	nd
358	2,4-dinitrotoluene	nd
368	2,6-dinitrotoluene	nd
378	1,2-diphenylhydrazine (as azobenzene)	nd
398	fluoranthene	nd
408	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS		µg/L
418	4-bromophenyl phenyl ether	nd
428	bis(2-chloroisopropyl)ether	nd
438	bis(2-chloroethoxy)methane	nd
528	hexachlorobutadiene	nd
538	hexachlorocyclopentadiene	nd
548	isophorone	nd
558	naphthalene	nd
568	nitrobenzene	nd
618	N-nitrosodimethylamine	nd
628	N-nitrosodiphenylamine	nd
638	N-nitrosodi-n-propylamine	nd
668	bis(2-ethylhexyl)phthalate	nd
678	butyl benzyl phthalate	nd
688	di-n-butyl phthalate	nd
698	di-n-octyl phthalate	nd
708	diethyl phthalate	nd
718	dimethyl phthalate	nd
728	benzo(a)anthracene	nd
738	benzo(a)pyrene	nd
748	3,4-benzofluoranthene	nd
758	benzo(k)fluoranthene	nd
768	chrysene	nd
778	acenaphthylene	nd
788	anthracene	nd
798	benzo(ghi)perylene	nd
808	fluorene	nd
818	phenanthrene	nd
828	dibenzo(a,h)anthracene	nd
838	indeno(1,2,3-cd)pyrene	nd
848	pyrene	nd

AD-A133 006

INSTALLATION RESTORATION PROGRAM PHASE II CONFIRMATION

6/8

MCCLELLAN AFB CALIFORNIA VOLUME 2(U)

ENGINEERING-SCIENCE INC ARCADIA CALIF

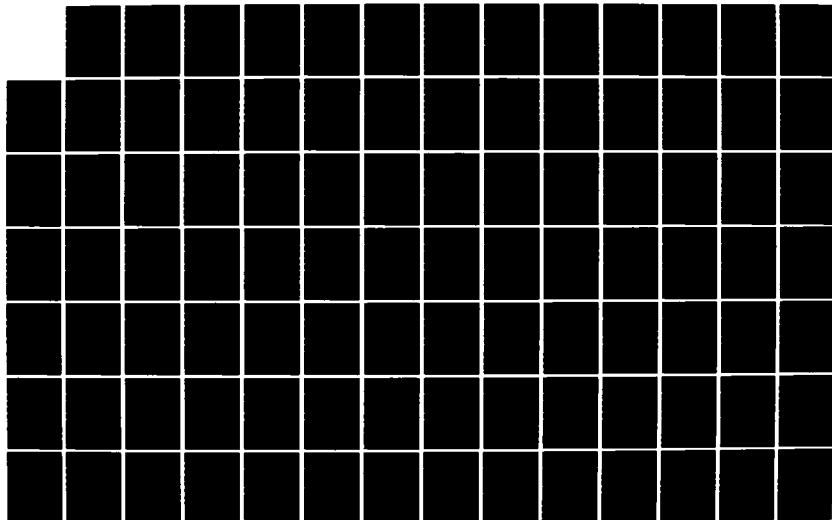
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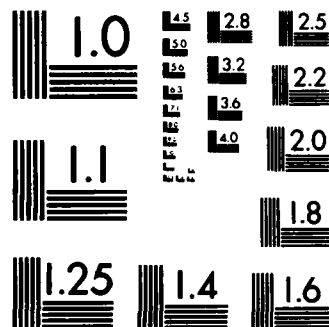
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F/G 13/2

NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

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PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15023-4

CLIENT I.D. Well 25D ✓

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

ug/L

41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl)ether	ND
43B	bis(2-chloroethoxy)methane	ND
52B	bexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis(2-ethylhexyl)phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	* ✓
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID mw 25DES ID 8207906/15-82Aliquot analyzed 12Date Received 6/24-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.12
2,4,5,T	0.001	0.025
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-481

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Wickham AFBES ID 820936Well # 25DAliquot analyzed 12Date Received 13 August 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 27 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	<0.009
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	0.004
2,4,5 TP (Silvex)	0.002	
DECP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820936

MW #250

Aliquot Analyzed 12

Date Received 13 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 27 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected

METALS REPORT FORM

Sample ID McClellan AFBES ID 822790MW #250Aliquot analyzed Date Received 24 June 1982Method Used Date analyzed Chemist Approved

Element	Code	Detection Limit (ppb)		Detected <small>mg/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total 0.06	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0005	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	40.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.024	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

4/28/82 sample

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science CAL LAB NO. 14545-3
CLIENT I.D. MW 26 D

VOLATILES		ug/L or ug/Kg
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

S/11

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15015-4
CLIENT I.D.: 26D

PP#	<u>VOLATILES</u>	ug/L
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1,-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

* less than 10ug/L

ND= not detected

COMMENTS:

California Analytical Laboratories, Inc.

2-487

4/28/82 JMM/PLW

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering ScienceCAL LAB NO. 14545-3CLIENT I.D. 10

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	ug/L
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

2-488

CHARLES J. SOOBERGUST, Ph.D
VICE PRESIDENT

RUBY A. ULRICH
SECRETARY/TREASURER

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5195

8111

CLIENT: ENGINEERING SCIENCE

CAL LAB NO. 15015-4
CLIENT I.D.: WELL 26D

<u>ACID COMPOUNDS</u>	<u>ug/L.</u>	<u>BASE/NEUTRAL COMPOUNDS</u>	<u>ug/L.</u>
21A 2,4,6-trichlorophenol	ND	41B 4-bromophenyl phenyl ether	ND
22A p-chloro-m-cresol	ND	42B bis(2-chloroisopropyl)ether	ND
24A 2-chlorophenol	ND	43B bis(2-chloroethoxy)methane	ND
31A 2,4-dichlorophenol	ND	52B hexachlorobutadiene	ND
34A 2,4-dimethylphenol	ND	53B hexachlorocyclopentadiene	ND
57A 2-nitrophenol	ND	54B isophorone	ND
58A 4-nitrophenol	ND	55B naphthalene	ND
59A 2,4-dinitrophenol	ND	56B nitrobenzene	ND
60A 4,6-dinitro-o-cresol	ND	61B N-nitrosodimethylamine	ND
64A pentachlorophenol	ND	62B N-nitrosodiphenylamine	ND
65A phenol	* ✓	63B N-nitrosodi-n-propylamine	ND
		66B bis(2-ethylhexyl)phthalate	ND
<u>BASE/NEUTRAL COMPOUNDS</u>		67B butyl benzyl phthalate	ND
1B acenaphthene	ND	68B di-n-butyl phthalate	ND
5B benzidine	ND	69B di-n-octyl phthalate	ND
8B 1,2,4-trichlorobenzene	* ✓	70B diethyl phthalate	ND
9B hexachlorobenzene	ND	71B dimethyl phthalate	ND
12B hexachloroethane	ND	72B benzo(a)anthracene	ND
18B bis(2-chloroethyl)ether	ND	73B benzo(a)pyrene	ND
20B 2-chloronaphthalene	ND	74B 3,4-benzofluoranthene	ND
25B 1,2-dichlorobenzene	ND	75B benzo(k)fluoranthene	ND
26B 1,3-dichlorobenzene	ND	76B chrysene	ND
27B 1,4-dichlorobenzene	ND	77B acenaphthylene	ND
28B 3,3'-dichlorobenzene	ND	78B anthracene	ND
35B 2,4-dinitrotoluene	ND	79B benzo(ghi)perylene	ND
36B 2,6-dinitrotoluene	ND	80B fluorene	ND
37B 1,2-diphenylhydrazine	ND	81B phenanthrene	ND
(as azobenzene)	ND	82B dibenzo(a,h)anthracene	ND
39B fluoranthene	ND	83B indeno(1,2,3-cd)pyrene	ND
40B 4-chlorophenyl phenyl ether	ND	84B pyrene	ND

* = less than a detection limit of 10 ug/L
ND = not detected

2-580

PESTICIDE/HERBICIDE REPORT FORM

Sample ID 11126DES ID 820619Aliquot analyzed 12Date Received 4/29-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	0.004
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Wickham AFBES ID 820938Well #26DAliquot analyzed 12Date Received 13 August 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 30 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	<u>0.036</u>
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

no more for the pesticide print

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB
MW #260

ES ID 820938

Aliquot Analyzed 12

Date Received 13 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 30 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID Mc Clellan AFBES ID 820619MW #26D

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>11/9/82</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	---	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.1	
Calcium		50	---		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	---	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	---		
Magnesium		1	---		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	---	0.5	sample not analyzed for this metal	
Molybdenum	c	500	---		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	---		
Selenium	p,h,c,d	---	10	<0.01	
Silicon		10	---		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	40.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.05	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

4/22/82 sample

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14545-5

CLIENT I.D. MW 27D

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. #27D

CAL LAB NO. 15023-6

VOLATILES		ug/L
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	* ✓
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

4/28/82 *per ph*

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14575-1

CLIENT I.D. 1116 272

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

2-497

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

9/12

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15023-6

CLIENT I.D. Well 27D ✓

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	nd
22A	p-chloro-m-cresol	nd
24A	2-chlorophenol	nd
31A	2,4-dichlorophenol	nd
34A	2,4-dimethylphenol	nd
57A	2-nitrophenol	nd
58A	4-nitrophenol	nd
59A	2,4-dinitrophenol	nd
60A	4,6-dinitro-o-cresol	nd
64A	pentachlorophenol	nd
65A	phenol	nd

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	nd
5B	benzidine	nd
8B	1,2,4-trichlorobenzene	* ✓
9B	hexachlorobenzene	nd
12B	hexachloroethane	nd
18B	bis(2-chloroethyl)ether	nd
20B	2-chloronaphthalene	nd
25B	1,2-dichlorobenzene	nd
26B	1,3-dichlorobenzene	nd
27B	1,4-dichlorobenzene	nd
28B	3,3'-dichlorobenzidine	nd
35B	2,4-dinitrotoluene	nd
36B	2,6-dinitrotoluene	nd
37B	1,2-diphenylhydrazine (as azobenzene)	nd
39B	fluoranthene	nd
40B	4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS

ug/L

41B	4-bromophenyl phenyl ether	nd
42B	bis(2-chloroisopropyl)ether	nd
43B	bis(2-chloroethoxy)methane	nd
52B	bexachlorobutadiene	nd
53B	hexachlorocyclopentadiene	nd
54B	isophorone	nd
55B	naphthalene	nd
56B	nitrobenzene	nd
61B	N-nitrosodimethylamine	nd
62B	N-nitrosodiphenylamine	nd
63B	N-nitrosodi-n-propylamine	nd
66B	bis(2-ethylhexyl)phthalate	nd
67B	butyl benzyl phthalate	nd
68B	di-n-butyl phthalate	nd
69B	di-n-octyl phthalate	nd
70B	diethyl phthalate	nd
71B	dimethyl phthalate	nd
72B	benzo(a)anthracene	nd
73B	benzo(a)pyrene	nd
74B	3,4-benzofluoranthene	nd
75B	benzo(k)fluoranthene	nd
76B	chrysene	nd
77B	acenaphthylene	nd
78B	anthracene	nd
79B	benzo(ghi)perylene	nd
80B	fluorene	nd
81B	phenanthrene	nd
82B	dibenzo(a,h)anthracene	nd
83B	indeno(1,2,3-cd)pyrene	nd
84B	pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID NH 270ES ID 820630Aliquot analyzed 12Date Received 9-20-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.12
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.04
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID 820940Well # 27DAliquot analyzed 1LDate Received 13 August 1982Detector Used: Coulson, EC, Flame, PIDDate analyzed 31 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	0.003
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

no identifiable pesticide peaks

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB
MW #270

ES ID 820940

Aliquot Analyzed 1L

Date Received 13 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 31 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected

METALS REPORT FORM

Sample ID McClellan AFBES ID 0630MW # 270

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <i>mg/l</i>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	0.005	
Arsenic	p,h,c,d,o	---	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	0.023	
Calcium		50	---		
Chromium (+3)	p,h,c,d,o	20	1 } <i>total</i>	<0.05	
Chromium (+6)	c	---			
Cobalt		50	1		
Copper	p,c,d,o	20	1	0.13	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	---		
Magnesium		1	---		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	---	0.5	<0.0005	
Molybdenum	c	500	---		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	---		
Selenium	p,h,c,d	---	10	<0.01	
Silicon		10	---		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.32	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

6/16 sample

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. MW 28D

CAL LAB NO. 14772-8

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	nd
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	nd
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

8/17

5806 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. Well 28D

CAL LAB NO. 15052-16

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	* ✓
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	10 ✓
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8807

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14772-8

CLIENT I.D. MW28D

ACID COMPOUNDS		ug/L	BASE/NEUTRAL COMPOUNDS		ug/L
21A	2,4,6-trichlorophenol	nd	41B	4-bromophenyl phenyl ether	nd
22A	p-chloro-o-cresol	nd	42B	bis(2-chloroisopropyl)ether	nd
24A	2-chlorophenol	nd	43B	bis(2-chloroethoxy)methane	nd
31A	2,4-dichlorophenol	nd	52B	hexachlorobutadiene	nd
34A	2,4-dimethylphenol	nd	53B	hexachlorocyclopentadiene	nd
57A	2-nitrophenol	nd	54B	isophorone	nd
58A	4-nitrophenol	nd	55B	naphthalene	nd
59A	2,4-dinitrophenol	nd	56B	nitrobenzene	nd
60A	4,6-dinitro-o-cresol	nd	61B	N-nitrosodimethylamine	nd
64A	pentachlorophenol	nd	62B	N-nitrosodiphenylamine	nd
65A	phenol	nd	63B	N-nitrosodi-n-propylamine	nd
			66B	bis(2-ethylhexyl)phthalate	nd
			67B	butyl benzyl phthalate	nd
			68B	di-n-butyl phthalate	nd
			69B	di-n-octyl phthalate	nd
			70B	diethyl phthalate	nd
			71B	dimethyl phthalate	nd
			72B	benzo(a)anthracene	nd
			73B	benzo(a)pyrene	nd
			74B	3,4-benzofluoranthene	nd
			75B	benzo(k)fluoranthene	nd
			76B	chrysene	nd
			77B	acenaphthylene	nd
			78B	anthracene	nd
			79B	benzo(ghi)perylene	nd
			80B	fluorene	nd
			81B	phenanthrene	nd
			82B	dibenzo(a,h)anthracene	nd
			83B	indeno(1,2,3-cd)pyrene	nd
			84B	pyrene	nd
BASE/NEUTRAL COMPOUNDS					
18	acenaphthene	nd			
58	benzidine	nd			
88	1,2,4-trichlorobenzene	nd			
98	hexachlorobenzene	nd			
12B	hexachloroethane	nd			
18B	bis(2-chloroethyl)ether	nd			
20B	2-chloronaphthalene	nd			
25B	1,2-dichlorobenzene	nd			
26B	1,3-dichlorobenzene	nd			
27B	1,4-dichlorobenzene	nd			
28B	3,3'-dichlorobenzidine	nd			
35B	2,4-dinitrotoluene	nd			
36B	2,6-dinitrotoluene	nd			
37B	1,2-diphenylhydrazine (as azobenzene)	nd			
39B	fluoranthene	nd			
40B	4-chlorophenyl phenyl ether	nd			

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

8/17

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-16

CLIENT I.D. Well 28D1

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	nd
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID

mw
2ED

ES ID

E2CEC3

6/6-82

Aliquot analyzed

12

Date Received 6/24-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed

Chemist

LIB

Approved

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	0.145
Alpha BHC	0.002	
Beta BHC	0.004	0.027
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.246
2,4,5,T	0.001	0.022
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-508

PESTICIDE/HERBICIDE REPORT FORM

Sample ID 114 Clellan/FBES ID 820957Well # 28DAliquot analyzed 12Date Received 18 August, 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 26 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	<.006
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	<.004
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	<.001
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

2-509

AROCOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820957

MW #280

Aliquot Analyzed 12

Date Received 18 August 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 26 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID Mc Jellan AFB
NW #280ES ID 820803

Aliquot analyzed _____

Date Received 24 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/L</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	0.0039	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<0.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.14	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

4/29 sample

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science CAL LAB NO. 14536-9
CLIENT I.D. MW 29 D

VOLATILES		ug/L or ug/Kg
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. Well 29D

CAL LAB NO. 15052-15

	<u>VOLATILES</u>	<u>ug/L</u>
2V	acrolein	nd
3V	acrylonitrile	nd
4V	benzene	nd
6V	carbon tetrachloride	nd
7V	chlorobenzene	nd
10V	1,2-dichloroethane	nd
11V	1,1,1-trichloroethane	nd
13V	1,1-dichloroethane	nd
14V	1,1,2-trichloroethane	nd
15V	1,1,2,2-tetrachloroethane	nd
16V	chloroethane	nd
19V	2-chloroethylvinyl ether	nd
23V	chloroform	nd
29V	1,1-dichloroethylene	*✓
30V	1,2-trans-dichloroethylene	nd
32V	1,2-dichloropropane	nd
33V	1,3-dichloropropylene	nd
38V	ethylbenzene	nd
44V	methylene chloride	nd
45V	methyl chloride	nd
46V	methyl bromide	nd
47V	bromoform	nd
48V	dichlorobromomethane	nd
49V	trichlorofluoromethane	nd
50V	dichlorodifluoromethane	nd
51V	chlorodibromomethane	nd
85V	tetrachloroethylene	nd
86V	toluene	nd
87V	trichloroethylene	10
88V	vinyl chloride	nd
	1,1,2-trichloro-2,2,1-trifluoroethane	nd

* = Less than 10 ug/L
ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 18th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-9802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14556-9

CLIENT I.D. MW 292

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-8105

8/10

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15052-15
CLIENT I.D. Well 29D

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	nd
22A p-chloro-m-cresol	nd
24A 2-chlorophenol	nd
31A 2,4-dichlorophenol	nd
34A 2,4-dimethylphenol	nd
57A 2-nitrophenol	nd
58A 4-nitrophenol	nd
59A 2,4-dinitrophenol	nd
60A 4,6-dinitro-o-cresol	nd
64A pentachlorophenol	nd
65A phenol	nd

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	nd
5B benzidine	nd
8B 1,2,4-trichlorobenzene	nd
9B hexachlorobenzene	nd
12B hexachloroethane	nd
18B bis(2-chloroethyl)ether	nd
20B 2-chloronaphthalene	nd
25B 1,2-dichlorobenzene	nd
26B 1,3-dichlorobenzene	nd
27B 1,4-dichlorobenzene	nd
28B 3,3'-dichlorobenzidine	nd
35B 2,4-dinitrotoluene	nd
36B 2,6-dinitrotoluene	nd
37B 1,2-diphenylhydrazine (as azobenzene)	nd
39B fluoranthene	nd
40B 4-chlorophenyl phenyl ether	nd

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	nd
42B bis(2-chloroisopropyl)ether	nd
43B bis(2-chloroethoxy)methane	nd
52B hexachlorobutadiene	nd
53B hexachlorocyclopentadiene	nd
54B isophorone	nd
55B naphthalene	nd
56B nitrobenzene	nd
61B N-nitrosodimethylamine	nd
62B N-nitrosodiphenylamine	nd
63B N-nitrosodi-n-propylamine	nd
66B bis(2-ethylhexyl)phthalate	9 ✓
67B butyl benzyl phthalate	nd
68B di-n-butyl phthalate	nd
69B di-n-octyl phthalate	nd
70B diethyl phthalate	nd
71B dimethyl phthalate	nd
72B benzo(a)anthracene	nd
73B benzo(a)pyrene	nd
74B 3,4-benzofluoranthene	nd
75B benzo(k)fluoranthene	nd
76B chrysene	nd
77B acenaphthylene	nd
78B anthracene	nd
79B benzo(ghi)perylene	nd
80B fluorene	nd
81B phenanthrene	nd
82B dibenzo(a,h)anthracene	nd
83B indeno(1,2,3-cd)pyrene	nd
84B pyrene	nd

PESTICIDE/HERBICIDE REPORT FORM

Sample ID L140 2917ES ID 820626Aliquot analyzed 12Date Received 4/29-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.82
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

PESTICIDE/HERBICIDE REPORT FORM

Sample ID 115 Clellan AFBES ID 820954Well # 29DAliquot analyzed 12Date Received 18 August 1982Detector Used: Coulson, EC Flame, PIDDate analyzed 26 Aug 82Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.061 0.104
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	
2,4,5,T	0.001	
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

no ident. table
herbicide parts

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 820959

MW #390

Aliquot Analyzed 12

Date Received 18 August 1982

Detector Used: EC Coulson, Flame, PID

Date Analyzed 26 August 1982

Chemist HF

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFBES ID 0626MW #290

Aliquot analyzed _____

Date Received 29 April 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>11.5%</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<0.005	
Arsenic	p,h,c,d,o	—	10	<0.05	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<0.01	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total <0.05	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<0.05	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<0.01	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.0026	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<0.05	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<0.01	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	40.05	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	0.07	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

ADDITIONAL ANALYSES
STAGE I MONITORING WELLS

ANALYSIS RESULTS

N-Clellan AFB

DATE RECEIVED: 14 Aug 67
 DATE REQUESTED:
 REQUESTED BY:
 PROJECT NUMBER: 0792

ANALYSIS PERFORMED

ANALYSIS	ALIPHATIC GFO	CYANIDE	CRESOLIC ACID	HERBICIDE	INSECTICIDE	PESTICIDE	TEST	REMARKS
UNITS	mg/l	mg/l	mg/l					
820924 ¹⁰	1.8	2.02	—	—	—	—	—	individual sheets
820926 ¹⁰	1.8	2.02	—	—	—	—	—	
820928 ¹⁰	—	.05	—	—	—	—	—	
820929 ¹⁰	—	2.02	—	—	—	—	—	
820930 ¹⁰	—	2.02	—	—	—	—	—	
820931 ¹⁰	—	2.02	—	—	—	—	—	
820932 ¹⁰	—	2.02	—	—	—	—	—	
820933 ¹⁰	—	2.02	—	—	—	—	—	
820934 ¹⁰	—	2.02	—	—	—	—	—	
820935 ¹⁰	—	2.02	—	—	—	—	—	
820938	—	2.02	—	—	—	—	—	
820937	—	.15	—	—	—	—	—	
820938	—	2.02	<5	—	—	—	—	
820939	—	.02	<5	—	—	—	—	
820940	—	* 2.02	—	—	—	—	—	
820941	—	2.02	—	—	—	—	—	
ANALYST	DP	IX						

* Average of quality assurance samples

SAMPLE IDENTIFICATION

05-528

ANALYSIS RESULTS

DATE RECEIVED: 18 Aug 82
 DATE REQUESTED:
 REQUESTED BY:
 PROJECT NUMBER: 7792

McClellan AFB

ANALYSIS PERFORMED

ANALYSIS	CN-	Herbs & pests	see	individual	sheets	ppb
UNITS	mg/l	(LURE #)				
820949 ¹⁰	.02	16S				
950 ¹⁰	L.02	16D				
951 ¹⁰	L.02	17S				
952 ¹⁰	*L.02	17D				
953 ¹⁰	L.02	18S				
954 ¹⁰	L.02	18D				
955 ¹⁰	L.02	19S				
956 ¹⁰	L.02	19D				
957 ¹⁰	L.02	28D				
958 ¹⁰	.95	29S				
959 ¹⁰	L.02	29D				
960 ¹⁰	L.02	30S				
961 ¹⁰	L.02	31S				
962 ¹⁰	.02	1A				
ANALYST	VA					4H

SAMPLE IDENTIFICATION

* Average of quality assurance samples

705-2

APPENDIX M

**ANALYTICAL DATA
STAGE II MONITORING WELLS**

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

9/29

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-1

CLIENT I.D. Well #33S

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	5
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	30
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	2000
88V	vinyl chloride	ND

ND = Not detected

2-526

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

9/29

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15245-1

CLIENT I.D. Well #33S

<u>ACID COMPOUNDS</u>		<u>µg/L</u>
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

<u>BASE/NEUTRAL COMPOUNDS</u>		
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

<u>BASE/NEUTRAL COMPOUNDS</u>		<u>µg/L</u>
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl)ether	ND
43B	bis(2-chloroethoxy)methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis(2-ethylhexyl)phthalate	68
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

2527

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McChallen AFBES ID 821054Well # 335Aliquot analyzed 2.2gDate Received 10/1/82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 17 OCT 82Chemist MSB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	LO.003
Alpha BHC	0.002	LO.002
Beta BHC	0.004	LO.004
Delta BHC	0.004	0.066
Gamma BHC (lindane)	0.002	LO.002
Chlordane	0.04	LO.04
DDD (TDE)	0.012	LO.012
DDE	0.006	LO.006
DDT	0.016	LO.016
Dieldrin	0.006	LO.006
Endosulfan I	0.005	LO.005
Endosulfan II	0.01	LO.01
Endosulfan sulfate	0.03	LO.03
Endrin	0.009	LO.009
Heptachlor	0.002	LO.002
Heptachlor epoxide	0.004	LO.004
Methoxychlor	0.02	LO.02
Toxaphene	0.40	LO.40
2,4,D	0.001	0.154
2,4,5,T	0.001	<.001
2,4,5 TP (Silvex)	0.002	<.002
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 821054

MW 335

Aliquot Analyzed 2.20 μ l

Date Received 1 October 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 17 October 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFBES ID 821054Well # 335

Aliquot analyzed _____

Date Received 10/1/82

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50	<u>ug/l</u>	
Antimony	p,c	500	10	<u><10</u>	
Arsenic	p,h,c,d,o	—	10	<u><50</u>	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<u><10</u>	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	<u><50</u>	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<u><50</u>	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<u>18</u>	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<u><0.5</u>	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<u><40</u>	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<u><10</u>	
Silicon		10	—		

INBBO

821054(LONT)

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<50	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	420	

codes: p - EPA priority pollutant
h - EPA hazardous waste
c - Ca. Dept. Health Services hazardous waste
d - EPA drinking water
o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

9/29

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-2

CLIENT I.D. Well #36S

VOLATILES

ug/l or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	5
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

2-532

California Analytical Laboratories, Inc.

6005 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

9/27

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-2

CLIENT I.D. #36S

ACID COMPOUNDS

	µg/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS

1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

	µg/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	54
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McChallen AFBES ID 821055Well # 365Aliquot analyzed 2.65 µlDate Received 10/1/82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 17 Oct, 1982Chemist NEB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	40.003
Alpha BHC	0.002	40.002
Beta BHC	0.004	40.004
Delta BHC	0.004	0.092
Gamma BHC (lindane)	0.002	0.015
Chlordane	0.04	40.04
DDD (TDE)	0.012	40.012
DDE	0.006	40.006
DDT	0.016	40.016
Dieldrin	0.006	40.006
Endosulfan I	0.005	40.005
Endosulfan II	0.01	40.01
Endosulfan sulfate	0.03	40.03
Endrin	0.009	40.009
Heptachlor	0.002	40.002
Heptachlor epoxide	0.004	0.01
Methoxychlor	0.02	40.02
Toxaphene	0.40	40.40
2,4,D	0.001	0.56
2,4,5,T	0.001	40.001
2,4,5 TP (Silvex)	0.002	40.002
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 821055

MW#365

Aliquot Analyzed 2.65 μ l

Date Received 1 October 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 17 October 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McChallen AFBES ID 821055Well # 365

Aliquot analyzed _____

Date Received 10/1/82

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <i>light</i>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<10	
Arsenic	p,h,c,d,o	—	10	<50	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<10	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	<50	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<50	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	19	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.5	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<40	
Potassium		10	—		
Selenium	p,h,c,d	—	10	10.	
Silicon		10	—		

WU 335

821055(Cond)

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	250	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	250	

codes: p - EPA priority pollutant
h - EPA hazardous waste
c - Ca. Dept. Health Services hazardous waste
d - EPA drinking water
o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-3

CLIENT I.D. Well #375

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

6885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6106

9/25

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-3

CLIENT I.D. Well #37S

<u>ACID COMPOUNDS</u>		<u>µg/L</u>
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

<u>BASE/NEUTRAL COMPOUNDS</u>		
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

<u>BASE/NEUTRAL COMPOUNDS</u>	<u>µg/L</u>
41B	4-bromophenyl phenyl ether
42B	bis(2-chloroisopropyl)ether
43B	bis(2-chloroethoxy)methane
52B	hexachlorobutadiene
53B	hexachlorocyclopentadiene
54B	isophorone
55B	naphthalene
56B	nitrobenzene
61B	N-nitrosodimethylamine
62B	N-nitrosodiphenylamine
63B	N-nitrosodi-n-propylamine
66B	bis(2-ethylhexyl)phthalate
67B	butyl benzyl phthalate
68B	di-n-butyl phthalate
69B	di-n-octyl phthalate
70B	diethyl phthalate
71B	dimethyl phthalate
72B	benzo(a)anthracene
73B	benzo(a)pyrene
74B	3,4-benzofluoranthene
75B	benzo(k)fluoranthene
76B	chrysene
77B	acenaphthylene
78B	anthracene
79B	benzo(ghi)perylene
80B	fluorene
81B	phenanthrene
82B	dibenzo(a,h)anthracene
83B	indeno(1,2,3-cd)pyrene
84B	pyrene

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID 821049Well # 375

Aliquot analyzed _____

Date Received 10/1/82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 2 Nov. 1982Chemist MSB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	4.0003
Alpha BHC	0.002	4.0002
Beta BHC	0.004	4.0.004
Delta BHC	0.004	0.121
Gamma BHC (lindane)	0.002	4.0.002
Chlordane	0.04	4.0.04
DDD (TDE)	0.012	4.0.012
DDE	0.006	4.0.006
DDT	0.016	4.0.016
Dieldrin	0.006	4.0.006
Endosulfan I	0.005	4.0.005
Endosulfan II	0.01	4.0.01
Endosulfan sulfate	0.03	4.0.03
Endrin	0.009	4.0.009
Heptachlor	0.002	4.0.002
Heptachlor epoxide	0.004	4.0.004
Methoxychlor	0.02	4.0.02
Toxaphene	0.40	4.0.40
2,4,D	0.001	4.0.01
2,4,5,T	0.001	0.004
2,4,5 TP (Silvex)	0.002	<.002
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 821049

MW#375

Aliquot Analyzed _____

Date Received 1 October 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 2 November 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McChallan AFBES ID 821049Well # 375Aliquot analyzed Date Received 10/1/82Method Used Date analyzed Chemist Approved

Element	Code	Detection Limit (ppb)		Detected <i>ug/l</i>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<10	
Arsenic	p,h,c,d,o	—	10	<50	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<10	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	<50	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<50	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	10	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.5	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<40	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<10	
Silicon		10	—		

821049(CONT)

11W375

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	450	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	420	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

9/14
CLIENT Engineering Science

CAL LAB NO. 15174-1

CLIENT I.D. Well # 395

VOLATILES

ug/l or ug/kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

9/14

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

15774-1

CLIENT I.D.

WUC 395

ACID COMPOUNDS

µg/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

µg/L

41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl)ether	ND
43B	bis(2-chloroethoxy)methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis(2-ethylhexyl)phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

California Analytical Laboratories, Inc.

5895 Power Inn Road
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(916)-381-5105

9/29

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-5

CLIENT I.D. #405

VOLATILES

ug/l or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	5
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

6885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

9/29

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-5

CLIENT I.D. Well #40S

<u>ACID COMPOUNDS</u>		<u>µg/L</u>
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

<u>BASE/NEUTRAL COMPOUNDS</u>		
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

<u>BASE/NEUTRAL COMPOUNDS</u>	<u>µg/L</u>
41B	4-bromophenyl phenyl ether
42B	bis(2-chloroisopropyl)ether
43B	bis(2-chloroethoxy)methane
52B	hexachlorobutadiene
53B	hexachlorocyclopentadiene
54B	isophorone
55B	naphthalene
56B	nitrobenzene
61B	N-nitrosodimethylamine
62B	N-nitrosodiphenylamine
63B	N-nitrosodi-n-propylamine
66B	bis(2-ethylhexyl)phthalate
67B	butyl benzyl phthalate
68B	di-n-butyl phthalate
69B	di-n-octyl phthalate
70B	diethyl phthalate
71B	dimethyl phthalate
72B	benzo(a)anthracene
73B	benzo(a)pyrene
74B	3,4-benzofluoranthene
75B	benzo(k)fluoranthene
76B	chrysene
77B	acenaphthylene
78B	anthracene
79B	benzo(ghi)perylene
80B	fluorene
81B	phenanthrene
82B	dibenzo(a,h)anthracene
83B	indeno(1,2,3-cd)pyrene
84B	pyrene

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McChellan AFBES ID 821051Well # 405Aliquot analyzed 2.30 μ lDate Received 10/1/82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 17 Oct, 1982Chemist MSB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	<u><0.003</u>
Alpha BHC	0.002	<u><0.002</u>
Beta BHC	0.004	<u><0.004</u>
Delta BHC	0.004	<u>0.048</u>
Gamma BHC (lindane)	0.002	<u><0.002</u>
Chlordane	0.04	<u><0.04</u>
DOD (TDE)	0.012	<u><0.012</u>
DDE	0.006	<u><0.006</u>
DDT	0.016	<u><0.016</u>
Dieldrin	0.006	<u><0.006</u>
Endosulfan I	0.005	<u><0.005</u>
Endosulfan II	0.01	<u><0.01</u>
Endosulfan sulfate	0.03	<u><0.03</u>
Endrin	0.009	<u><0.009</u>
Heptachlor	0.002	<u><0.002</u>
Heptachlor epoxide	0.004	<u><0.004</u>
Methoxychlor	0.02	<u><0.02</u>
Toxaphene	0.40	<u><0.40</u>
2,4,D	0.001	<u><0.001</u>
2,4,5,T	0.001	<u><0.001</u>
2,4,5 TP (Silvex)	0.002	<u><0.002</u>
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCOR (PCB) REPORT FORM

5

Sample ID Mc Clellan AFB

ES ID 821051

MW #405

Aliquot Analyzed 2.30 μ L

Date Received 1 October 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 17 October 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McChallen AFBES ID 821051Well # 405

Aliquot analyzed _____

Date Received 10/1/82

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50	<u>492</u>	
Antimony	p,c	500	10	<u><10</u>	
Arsenic	p,h,c,d,o	—	10	<u><50</u>	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<u><10</u>	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	<u><50</u>	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<u><50</u>	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<u>13</u>	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<u><0.5</u>	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<u><40</u>	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<u><10</u>	
Silicon		10	—		

11/14/85

821051 (CONT)

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	< 50	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	< 20	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

9/14

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science
CLIENT I.D. Well #415

CAL LAB NO. 15174-2

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	5
30V	1,2-trans-dichloroethylene	10
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	20
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6106

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

15174-2

CLIENT I.D.

Well #415

ACID COMPOUNDS

µg/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

18	acenaphthene	ND
58	benzidine	ND
88	1,2,4-trichlorobenzene	4
98	hexachlorobenzene	ND
128	hexachloroethane	ND
188	bis(2-chloroethyl)ether	ND
208	2-chloronaphthalene	ND
258	1,2-dichlorobenzene	ND
268	1,3-dichlorobenzene	ND
278	1,4-dichlorobenzene	ND
288	3,3'-dichlorobenzidine	ND
358	2,4-dinitrotoluene	ND
368	2,6-dinitrotoluene	ND
378	1,2-diphenylhydrazine (as azobenzene)	ND
398	fluoranthene	ND
408	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

µg/L

418	4-bromophenyl phenyl ether	ND
428	bis(2-chloroisopropyl)ether	ND
438	bis(2-chloroethoxy)methane	ND
528	hexachlorobutadiene	ND
538	hexachlorocyclopentadiene	ND
548	isophorone	ND
558	naphthalene	ND
568	nitrobenzene	ND
618	N-nitrosodimethylamine	ND
628	N-nitrosodiphenylamine	ND
638	N-nitrosodi-n-propylamine	ND
668	bis(2-ethylhexyl)phthalate	ND
678	butyl benzyl phthalate	ND
688	di-n-butyl phthalate	ND
698	di-n-octyl phthalate	ND
708	diethyl phthalate	ND
718	dimethyl phthalate	ND
728	benzo(a)anthracene	ND
738	benzo(a)pyrene	ND
748	3,4-benzofluoranthene	ND
758	benzo(k)fluoranthene	ND
768	chrysene	ND
778	acenaphthylene	ND
788	anthracene	ND
798	benzo(ghi)perylene	ND
808	fluorene	ND
818	phenanthrene	ND
828	dibenzo(a,h)anthracene	ND
838	indeno(1,2,3-cd)pyrene	ND
848	pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Mc ClellanES ID B21013Well 415Aliquot analyzed 630 µlDate Received 16 Sept 82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 17 OCT 82Chemist MSB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	<0.003
Alpha BHC	0.002	<0.002
Beta BHC	0.004	<0.004
Delta BHC	0.004	<0.004
Gamma BHC (lindane)	0.002	<0.002
Chlordane	0.04	<0.04
DDD (TDE)	0.012	<0.012
DDE	0.006	<0.006
DDT	0.016	<0.016
Dieldrin	0.006	<0.006
Endosulfan I	0.005	<0.005
Endosulfan II	0.01	<0.01
Endosulfan sulfate	0.03	<0.03
Endrin	0.009	<0.009
Heptachlor	0.002	<0.002
Heptachlor epoxide	0.004	<0.004
Methoxychlor	0.02	<0.02
Toxaphene	0.40	<0.40
2,4,D	0.001	<0.001
2,4,5,T	0.001	<0.001
2,4,5 TP (Silvex)	0.002	<0.002
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 821013

MW#415

Aliquot Analyzed 6.30 μ L

Date Received 16 September 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 17 October 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellanES ID B21013Well 913

Aliquot analyzed _____

Date Received 16 Sept 82

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <i>ug/l</i>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<i><10</i>	
Arsenic	p,h,c,d,o	—	10	<i><50</i>	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<i><5</i>	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	<i><20</i>	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<i><20</i>	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<i><20</i>	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<i><0.5</i>	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<i><40</i>	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<i><10</i>	
Silicon		10	—		

MW415 (Continued)

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<10	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<10	

codes: p - EPA priority pollutant
h - EPA hazardous waste
c - Ca. Dept. Health Services hazardous waste
d - EPA drinking water
o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

9/27

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-6

CLIENT I.D. Well #42S

<u>VOLATILES</u>		<u>ug/L or ug/Kg</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 261-6105

9/27

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-6

CLIENT I.D. Well #42S

ACID COMPOUNDS

	µg/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS

1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

	µg/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID 821048Well # 425Aliquot analyzed 3.20, LDate Received 10/1/82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 19 Oct, 1982Chemist MSB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	40.003
Alpha BHC	0.002	40.002
Beta BHC	0.004	40.004
Delta BHC	0.004	* 0.051
Gamma BHC (lindane)	0.002	40.002
Chlordane	0.04	40.04
DDD (TDE)	0.012	40.012
DDE	0.006	40.006
DDT	0.016	40.016
Dieldrin	0.006	40.006
Endosulfan I	0.005	40.005
Endosulfan II	0.01	40.01
Endosulfan sulfate	0.03	40.03
Endrin	0.009	40.009
Heptachlor	0.002	40.002
Heptachlor epoxide	0.004	40.004
Methoxychlor	0.02	40.02
Toxaphene	0.40	40.40
2,4,D	0.001	40.001
2,4,5,T	0.001	40.001
2,4,5-TP (Silvex)	0.002	0.031
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB
MW #425

ES ID 821048

Aliquot Analyzed 3.20 μ L

Date Received 1 October 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 18 October 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFBES ID 821048WELL# 425

Aliquot analyzed _____

Date Received 10/1/82

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <i>ug/l</i>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<10	
Arsenic	p,h,c,d,o	—	10	<50	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<10	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	<50	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<50	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<10	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.5	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<40	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<10	
Silicon		10	—		

MAN 425

821048(cont.)

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	< 50	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	40.0	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

California Analytical Laboratories, Inc.

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Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15174-3

CLIENT I.D. Well #43S

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6105

7/14

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15174-3

CLIENT I.D. 6261# 435

ACID COMPOUNDS	µg/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
54A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	µg/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellanES ID B21012Well 433Aliquot analyzed 395, μ lDate Received 16 Sept 82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 18 Oct, 1982Chemist MSB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	< 0.003
Alpha BHC	0.002	< 0.002
Beta BHC	0.004	< 0.004
Delta BHC	0.004	< 0.004
Gamma BHC (lindane)	0.002	0.012
Chlordane	0.04	< 0.04
DDD (TDE)	0.012	< 0.012
DDE	0.006	< 0.006
DDT	0.016	< 0.016
Dieldrin	0.006	< 0.006
Endosulfan I	0.005	< 0.005
Endosulfan II	0.01	< 0.01
Endosulfan sulfate	0.03	< 0.03
Endrin	0.009	< 0.009
Heptachlor	0.002	0.013
Heptachlor epoxide	0.004	0.013
Methoxychlor	0.02	< 0.02
Toxaphene	0.40	< 0.40
2,4,D	0.001	< 0.001
2,4,5,T	0.001	< 0.001
2,4,5 TP (Silvex)	0.002	0.030
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

50

Sample ID McClellan AFB

ES ID 8021012

MW #435

Aliquot Analyzed 3.95 μ L

Date Received 16 September 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 18 October 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellanES ID BZ10MWeek 933

Aliquot analyzed _____

Date Received 16 Sept 82

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <i>ug/l</i>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<10	
Arsenic	p,h,c,d,o	---	10	<50	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	5	
Calcium		50	---		
Chromium (+3)	p,h,c,d,o	20	1	<20	
Chromium (+6)	c	---	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<20	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<20	
Lithium		50	---		
Magnesium		1	---		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	---	0.5	<0.5	
Molybdenum	c	500	---		
Nickel	p,c,o	40	1	<40	
Potassium		10	---		
Selenium	p,h,c,d	---	10	<10	
Silicon		10	---		

MW 43 S (Continued)

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<10	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<10	

codes: p - EPA priority pollutant
h - EPA hazardous waste
c - Ca. Dept. Health Services hazardous waste
d - EPA drinking water
o - Ocean waters of California

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

9/13

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 15174-4

CLIENT I.D. Well #445

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	30
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	10
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

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SACRAMENTO, CALIFORNIA 95824
(916) 381-8108

9/13

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

15774-4

CLIENT I.D.

15774-445

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	8
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

ug/L

41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl)ether	ND
43B	bis(2-chloroethoxy)methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis(2-ethylhexyl)phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	*
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellanES ID B21010Well 145Aliquot analyzed 35g/LDate Received 16 Sept 82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 18 Oct, 1982Chemist MSB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	<0.003
Alpha BHC	0.002	<0.002
Beta BHC	0.004	<0.004
Delta BHC	0.004	<0.004
Gamma BHC (lindane)	0.002	<0.002
Chlordane	0.04	<0.04
DDD (TDE)	0.012	<0.012
DDE	0.006	<0.006
DDT	0.016	<0.016
Dieldrin	0.006	<0.006
Endosulfan I	0.005	<0.005
Endosulfan II	0.01	<0.01
Endosulfan sulfate	0.03	<0.03
Endrin	0.009	<0.009
Heptachlor	0.002	<0.002
Heptachlor epoxide	0.004	<0.004
Methoxychlor	0.02	<0.02
Toxaphene	0.40	<0.40
2,4,D	0.001	<0.001
2,4,5,T	0.001	<0.001
2,4,5 TP (Silvex)	0.002	<0.002
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID Mc Clellan AFB

ES ID 821010

MW #445

Aliquot Analyzed 3.50 μ l

Date Received 16 September 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 18 October 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan
B21010ES ID B21010Well 443

Aliquot analyzed _____

Date Received 16 Sept 82

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	< 10	
Arsenic	p,h,c,d,o	---	10	< 50	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	< 5	
Calcium		50	---		
Chromium (+3)	p,h,c,d,o	20	1	< 20	
Chromium (+6)	c	---	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	< 20	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	< 20	
Lithium		50	---		
Magnesium		1	---		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	---	0.5	< 0.5	
Molybdenum	c	500	---		
Nickel	p,c,o	40	1	< 40	
Potassium		10	---		
Selenium	p,h,c,d	---	10	< 10	
Silicon		10	---		

MW 44S (Continued)

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	50 ¹⁰	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	15	

codes: p - EPA priority pollutant
h - EPA hazardous waste
c - Ca. Dept. Health Services hazardous waste
d - EPA drinking water
o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AD-A133 006

INSTALLATION RESTORATION PROGRAM PHASE II CONFIRMATION

7/8

MCCLELLAN AFB CALIFORNIA VOLUME 2(U)

ENGINEERING-SCIENCE INC ARCADIA CALIF

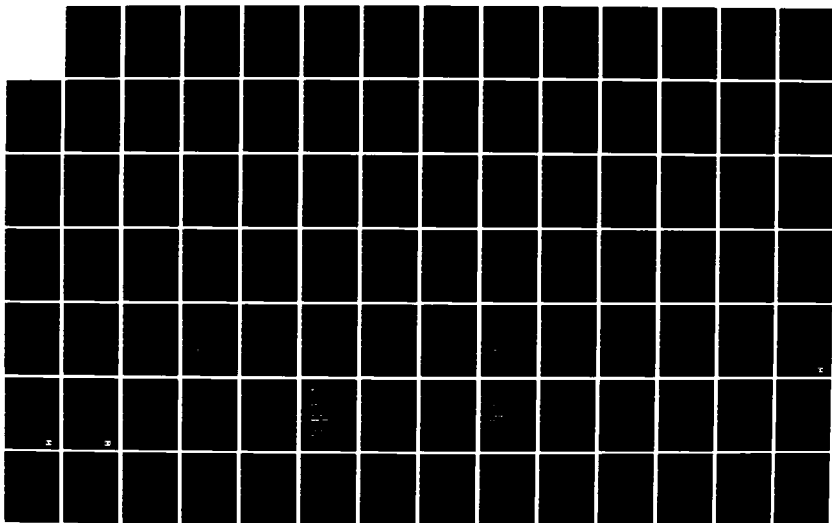
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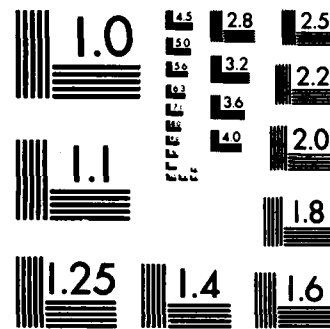
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NL





MICROCOPY RESOLUTION TEST CHART
NATIONAL BUREAU OF STANDARDS-1963-A

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

9/10
CLIENT

Engineering Science

CAL LAB NO.

15774-5

CLIENT I.D.

Well #455

VOLATILES

ug/l or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-8105

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

15174-5

CLIENT I.D.

well # 455

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

ug/L

41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl)ether	ND
43B	bis(2-chloroethoxy)methane	ND
52B	hexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis(2-ethylhexyl)phthalate	ND
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellanES ID 82011Well 453Aliquot analyzed 170Date Received 16 Sept 82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 1 Nov., 1982Chemist MSB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	<0.003
Alpha BHC	0.002	<0.002
Beta BHC	0.004	<0.004
Delta BHC	0.004	0.121
Gamma BHC (lindane)	0.002	0.038
Chlordane	0.04	<0.04
DDD (TDE)	0.012	<0.012
DDE	0.006	<0.006
DDT	0.016	<0.016
Dieldrin	0.006	<0.006
Endosulfan I	0.005	<0.005
Endosulfan II	0.01	<0.01
Endosulfan sulfate	0.03	<0.03
Endrin	0.009	<0.009
Heptachlor	0.002	<0.002
Heptachlor epoxide	0.004	<0.004
Methoxychlor	0.02	<0.02
Toxaphene	0.40	<0.40
2,4,D	0.001	<0.001
2,4,5,T	0.001	<0.001
2,4,5 TP (Silvex)	0.002	0.051
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID Mc Clellan AFB

ES ID 821011

MW #455

Aliquot Analyzed 1.70 μ L

Date Received 16 September 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 1 November 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellanES ID B21011Well 453

Aliquot analyzed _____

Date Received 16 Sept 82

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	< 10	
Arsenic	p,h,c,d,o	---	10	< 50	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	< 5	
Calcium		50	---		
Chromium (+3)	p,h,c,d,o	20	1	< 20	
Chromium (+6)	c	---	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	< 20	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	< 20	
Lithium		50	---		
Magnesium		1	---		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	---	0.5	< 0.5	
Molybdenum	c	500	---		
Nickel	p,c,o	40	1	< 40	
Potassium		10	---		
Selenium	p,h,c,d	---	10	< 10	
Silicon		10	---		

MW 45 S (Continued)

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	<10 50	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	<10	

codes: p - EPA priority pollutant
h - EPA hazardous waste
c - Ca. Dept. Health Services hazardous waste
d - EPA drinking water
o - Ocean waters of California

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

9/29

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-7

CLIENT I.D. Well #46S

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	5
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

8885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6125

9/29

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-7

CLIENT I.D. #46S

<u>ACID COMPOUNDS</u>	<u>ug/L</u>
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

<u>BASE/NEUTRAL COMPOUNDS</u>	
18 acenaphthene	ND
58 benzidine	ND
88 1,2,4-trichlorobenzene	ND
98 hexachlorobenzene	ND
128 hexachloroethane	ND
188 bis(2-chloroethyl)ether	ND
208 2-chloronaphthalene	ND
258 1,2-dichlorobenzene	ND
268 1,3-dichlorobenzene	ND
278 1,4-dichlorobenzene	ND
288 3,3'-dichlorobenzidine	ND
358 2,4-dinitrotoluene	ND
368 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
398 fluoranthene	ND
408 4-chlorophenyl phenyl ether	ND

<u>BASE/NEUTRAL COMPOUNDS</u>	<u>ug/L</u>
418 4-bromophenyl phenyl ether	ND
428 bis(2-chloroisopropyl)ether	ND
438 bis(2-chloroethoxy)methane	ND
528 hexachlorobutadiene	ND
538 hexachlorocyclopentadiene	ND
548 isophorone	ND
558 naphthalene	ND
568 nitrobenzene	ND
618 N-nitrosodimethylamine	ND
628 N-nitrosodiphenylamine	ND
638 N-nitrosodi-n-propylamine	ND
668 bis(2-ethylhexyl)phthalate	ND
678 butyl benzyl phthalate	ND
688 di-n-butyl phthalate	ND
698 di-n-octyl phthalate	ND
708 diethyl phthalate	ND
718 dimethyl phthalate	ND
728 benzo(a)anthracene	ND
738 benzo(a)pyrene	ND
748 3,4-benzofluoranthene	ND
758 benzo(k)fluoranthene	ND
768 chrysene	ND
778 acenaphthylene	ND
788 anthracene	ND
798 benzo(ghi)perylene	ND
808 fluorene	ND
818 phenanthrene	ND
828 dibenzo(a,h)anthracene	ND
838 indeno(1,2,3-cd)pyrene	ND
848 pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McCallan AFB

ES ID 821052

WELL# 465

Aliquot analyzed P 429ul

Date Received 10/1/82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 18 Oct, 1982

Chemist MSB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	2.0003
Alpha BHC	0.002	< 0.002
Beta BHC	0.004	2.0004
Delta BHC	0.004	< 0.004
Gamma BHC (lindane)	0.002	2.016
Chlordane	0.04	2.004
DDD (TDE)	0.012	2.0012
DDE	0.006	2.0006
DDT	0.016	2.0016
Dieldrin	0.006	2.0006
Endosulfan I	0.005	2.0005
Endosulfan II	0.01	2.001
Endosulfan sulfate	0.03	2.003
Endrin	0.009	2.0009
Heptachlor	0.002	2.0002
Heptachlor epoxide	0.004	2.0004
Methoxychlor	0.02	2.002
Toxaphene	0.40	2.040
2,4,D	0.001	2.001
2,4,5,T	0.001	2.001
2,4,5 TP (Silvex)	0.002	2.002
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCOR (PCB) REPORT FORM

Sample ID Mc Clellan AFB

ES ID 821052

MW # 465

Aliquot Analyzed 4.20 μ l

Date Received 1 October 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 18 October 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McClellan AFBES ID 821052Well # 46S

Aliquot analyzed _____

Date Received 10/1/82

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <i>μg/L</i>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	410	
Arsenic	p,h,c,d,o	---	10	250	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	410	
Calcium		50	---		
Chromium (+3)	p,h,c,d,o	20	1	250	
Chromium (+6)	c	---	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	250	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	18	
Lithium		50	---		
Magnesium		1	---		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	---	0.5	<0.5	
Molybdenum	c	500	---		
Nickel	p,c,o	40	1	240	
Potassium		10	---		
Selenium	p,h,c,d	---	10	410	
Silicon		10	---		

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021052(CONT)

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	450	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	450	

codes: p - EPA priority pollutant
h - EPA hazardous waste
c - Ca. Dept. Health Services hazardous waste
d - EPA drinking water
o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

9/29

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-8

CLIENT I.D. Well #475

VOLATILES

ug/l or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

6885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95834
(916) 381-6106

9/29

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-8

CLIENT I.D. Well #47S

ACID COMPOUNDS

µg/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-m-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

18	acenaphthene	ND
58	benzidine	ND
88	1,2,4-trichlorobenzene	ND
98	hexachlorobenzene	ND
128	hexachloroethane	ND
188	bis(2-chloroethyl)ether	ND
208	2-chloronaphthalene	ND
258	1,2-dichlorobenzene	ND
268	1,3-dichlorobenzene	ND
278	1,4-dichlorobenzene	ND
288	3,3'-dichlorobenzidine	ND
358	2,4-dinitrotoluene	ND
368	2,6-dinitrotoluene	ND
378	1,2-diphenylhydrazine (as azobenzene)	ND
398	fluoranthene	ND
408	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

µg/L

418	4-bromophenyl phenyl ether	ND
428	bis(2-chloroisopropyl)ether	ND
438	bis(2-chloroethoxy)methane	ND
528	hexachlorobutadiene	ND
538	hexachlorocyclopentadiene	ND
548	isophorone	ND
558	naphthalene	ND
568	nitrobenzene	ND
618	N-nitrosodimethylamine	ND
628	N-nitrosodiphenylamine	ND
638	N-nitrosodi-n-propylamine	ND
668	bis(2-ethylhexyl)phthalate	ND
678	butyl benzyl phthalate	ND
688	di-n-butyl phthalate	ND
698	di-n-octyl phthalate	ND
708	diethyl phthalate	ND
718	dimethyl phthalate	ND
728	benzo(a)anthracene	ND
738	benzo(a)pyrene	ND
748	3,4-benzofluoranthene	ND
758	benzo(k)fluoranthene	ND
768	chrysene	ND
778	acenaphthylene	ND
788	anthracene	ND
798	benzo(ghi)perylene	ND
808	fluorene	ND
818	phenanthrene	ND
828	dibenzo(a,h)anthracene	ND
838	indeno(1,2,3-cd)pyrene	ND
848	pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McChallan AFBES ID 821053WELL # 47SAliquot analyzed 1.45ulDate Received 10/1 82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 2 Nov, 1982Chemist MSB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	LO.003
Alpha BHC	0.002	LO.002
Beta BHC	0.004	LO.004
Delta BHC	0.004	LO.004
Gamma BHC (lindane)	0.002	0.041
Chlordane	0.04	LO.04
DDD (TDE)	0.012	LO.012
DDE	0.006	LO.006
DDT	0.016	LO.016
Dieldrin	0.006	LO.006
Endosulfan I	0.005	LO.005
Endosulfan II	0.01	LO.01
Endosulfan sulfate	0.03	LO.03
Endrin	0.009	LO.009
Heptachlor	0.002	LO.002
Heptachlor epoxide	0.004	LO.004
Methoxychlor	0.02	LO.02
Toxaphene	0.40	LO.40
2,4,D	0.001	<.001
2,4,5,T	0.001	<.001
2,4,5 TP (Silvex)	0.002	0.196
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

5

Sample ID McClellan AFB

RS ID 821053

MW # 475

Aliquot Analyzed 1.45 μ L

Date Received 1 October 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 2 November 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McChallen AFBES ID 821053Well # 475

Aliquot analyzed _____

Date Received 10/1/82

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <u>ug/l</u>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<u><10</u>	
Arsenic	p,h,c,d,o	—	10	<u><10</u>	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<u><10</u>	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	<u><50</u>	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<u><50</u>	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<u>17</u>	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<u><0.5</u>	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<u><40</u>	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<u><10</u>	
Silicon		10	—		

MW 475

821053(CONT)

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	450	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	420	

codes: p - EPA priority pollutant
h - EPA hazardous waste
c - Ca. Dept. Health Services hazardous waste
d - EPA drinking water
o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

9/29

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-9

CLIENT I.D. Well #495

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

6885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 351-5105

9/29

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-9

CLIENT I.D. Well #49S

<u>ACID COMPOUNDS</u>	<u>µg/L</u>
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

<u>BASE/NEUTRAL COMPOUNDS</u>	
1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

<u>BASE/NEUTRAL COMPOUNDS</u>	<u>µg/L</u>
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McChellan AFB

ES ID 821050

WELL # 495

Aliquot analyzed 4.35 u

Date Received 10/1/82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 10/18/82

Chemist MSB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	<0.003
Alpha BHC	0.002	<0.002
Beta BHC	0.004	<0.004
Delta BHC	0.004	<0.004
Gamma BHC (lindane)	0.002	<0.002
Chlordane	0.04	<0.04
DOD (TDE)	0.012	<0.012
DDE	0.006	<0.006
DDT	0.016	<0.016
Dieldrin	0.006	<0.006
Endosulfan I	0.005	<0.005
Endosulfan II	0.01	<0.01
Endosulfan sulfate	0.03	<0.03
Endrin	0.009	<0.009
Heptachlor	0.002	<0.002
Heptachlor epoxide	0.004	<0.004
Methoxychlor	0.02	<0.02
Toxaphene	0.40	<0.40
2,4,D	0.001	<0.001
2,4,5,T	0.001	<0.001
2,4,5 TP (Silvex)	0.002	<0.002
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID McClellan AFB

ES ID 821050

MW# 495

Aliquot Analyzed 4.35 μ l

Date Received 1 October 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 18 October 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID 77c Challen AFBES ID 821050Well # 495

Aliquot analyzed _____

Date Received 10/1/82

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <i>ug/L</i>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<i><10</i>	
Arsenic	p,h,c,d,o	—	10	<i><50</i>	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<i><10</i>	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	<i><50</i>	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<i><50</i>	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<i>16</i>	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<i><0.5</i>	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<i><40</i>	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<i><10</i>	
Silicon		10	—		

11/11/49 S

821050(cont)

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	< 50	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	< 20	

codes: p - EPA priority pollutant
h - EPA hazardous waste
c - Ca. Dept. Health Services hazardous waste
d - EPA drinking water
o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

9/27

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-4

CLIENT I.D. Well #38D

VOLATILES

ug/L or ug/Kg

2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	55
13V	1,1-dichloroethane	75
14V	1,1,2-trichloroethane	5
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	500
30V	1,2-trans-dichloroethylene	80
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	30
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

5885 POWER INN ROAD
SACRAMENTO, CALIFORNIA 95824
(916) 381-6108

9/27

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering-Science

CAL LAB NO. 15245-4

CLIENT I.D. Well #38D

<u>ACID COMPOUNDS</u>		<u>ug/L</u>
21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

<u>BASE/NEUTRAL COMPOUNDS</u>		
1B	acenaphthene	ND
5B	benzidine	ND
8B	1,2,4-trichlorobenzene	ND
9B	hexachlorobenzene	ND
12B	hexachloroethane	ND
18B	bis(2-chloroethyl)ether	ND
20B	2-chloronaphthalene	ND
25B	1,2-dichlorobenzene	ND
26B	1,3-dichlorobenzene	ND
27B	1,4-dichlorobenzene	ND
28B	3,3'-dichlorobenzidine	ND
35B	2,4-dinitrotoluene	ND
36B	2,6-dinitrotoluene	ND
37B	1,2-diphenylhydrazine (as azobenzene)	ND
39B	fluoranthene	ND
40B	4-chlorophenyl phenyl ether	ND

<u>BASE/NEUTRAL COMPOUNDS</u>		<u>ug/L</u>
41B	4-bromophenyl phenyl ether	ND
42B	bis(2-chloroisopropyl)ether	ND
43B	bis(2-chloroethoxy)methane	ND
52B	bexachlorobutadiene	ND
53B	hexachlorocyclopentadiene	ND
54B	isophorone	ND
55B	naphthalene	ND
56B	nitrobenzene	ND
61B	N-nitrosodimethylamine	ND
62B	N-nitrosodiphenylamine	ND
63B	N-nitrosodi-n-propylamine	ND
66B	bis(2-ethylhexyl)phthalate	42
67B	butyl benzyl phthalate	ND
68B	di-n-butyl phthalate	ND
69B	di-n-octyl phthalate	ND
70B	diethyl phthalate	ND
71B	dimethyl phthalate	ND
72B	benzo(a)anthracene	ND
73B	benzo(a)pyrene	ND
74B	3,4-benzofluoranthene	ND
75B	benzo(k)fluoranthene	ND
76B	chrysene	ND
77B	acenaphthylene	ND
78B	anthracene	ND
79B	benzo(ghi)perylene	ND
80B	fluorene	ND
81B	phenanthrene	ND
82B	dibenzo(a,h)anthracene	ND
83B	indeno(1,2,3-cd)pyrene	ND
84B	pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID McClellan AFBES ID 821047WELL #38DAliquot analyzed 1.70mlDate Received 10/1/82

Detector Used: Coulson, EC, Flame, PID

Date analyzed 17 Oct, 1982Chemist MSB

Approved _____

	Detection Limits	Found (ppb)
Aldrin	0.003	<0.003
Alpha BHC	0.002	<0.002
Beta BHC	0.004	0.021
Delta BHC	0.004	<0.004
Gamma BHC (lindane)	0.002	<0.002
Chlordane	0.04	<0.04
DDD (TDE)	0.012	<0.012
DDE	0.006	<0.006
DDT	0.016	<0.016
Dieldrin	0.006	<0.006
Endosulfan I	0.005	<0.005
Endosulfan II	0.01	<0.01
Endosulfan sulfate	0.03	<0.03
Endrin	0.009	<0.009
Heptachlor	0.002	<0.002
Heptachlor epoxide	0.004	<0.004
Methoxychlor	0.02	<0.02
Toxaphene	0.40	<0.40
2,4,D	0.001	<0.001
2,4,5,T	0.001	<0.001
2,4,5 TP (Silvex)	0.002	<0.002
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

AROCLOR (PCB) REPORT FORM

Sample ID Mc Clellan AFB

ES ID 821047

MW # 38 D

Aliquot Analyzed 1.70 μ L

Date Received 1 October 1982

Detector Used: EC, Coulson, Flame, PID

Date Analyzed 17 October 1982

Chemist MSB

Approved _____

	Detection Limits (ppb)	Found (ppb)
<u>Aroclor 1016</u>		
<u>Aroclor 1221</u>		
<u>Aroclor 1232</u>		
<u>Aroclor 1242</u>		
<u>Aroclor 1248</u>		
<u>Aroclor 1254</u>		
<u>Aroclor 1260</u>		

Not detected.

METALS REPORT FORM

Sample ID McCallan AFBES ID 821047(Well # 38D)

Aliquot analyzed _____

Date Received 10/1/82

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected mg/L	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	< 10	
Arsenic	p,h,c,d,o	—	10	< 50	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	< 10	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	< 50	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	< 50	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	< 10	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	< 0.5	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	< 40	
Potassium		10	—		
Selenium	p,h,c,d	—	10	< 10	
Silicon		10	—		

MW 38D

821047 (CONT)

Element	Code	Detection Limit (ppb)		<i>ug/l</i> Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	450	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	90.0	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

ENGINEERING-SCIENCE - BERKELEY LABORATORY

ANALYSIS OF RESULTS

McClellan AFB

DATE RECEIVED: 10/1/82
DATE REQUESTED:
REQUESTED BY: VANCE NORDHAY
PROJECT NUMBER: 09792-00

ANALYSIS PERFORMED

[illegible]

* Average of quality scores for all 100

ANALYSIS RESULTS

McLellan ATF3

ANALYSIS PERFORMED

DATE RECEIVED: 16 Sept 82
DATE REQUESTED: _____
REQUESTED BY: _____
PROJECT NUMBER: _____

[illegible]

* Average of quality assurance dimension.

NON-PRIORITY COMPOUNDS DETECTED IN GROUNDWATER SAMPLES

Well	Compound	Concentration (ppb)	Sampling Date
Base Production Wells			
BW17	N-(phenylmethyl)benzenesethanamine	~ 50	1-11-82
	N-(phenylmethylene)benzenesethanamine	~ 50	1-11-82
BW28	aroclor ^a	0.24	1-11-82
Base Monitoring Wells			
MW6	tetrahydrofuran	undetermined	3-30-82
MW7	tetrahydrofuran	undetermined	3-29-82
MW8	1,1,2-trichloro-1,2,2-trifluoroethane	undetermined	3-31-82
	hexahydro-2H-Azepin-2-one	undetermined	3-31-82
MW9	N-butylbenzene sulfonamide	undetermined	4-28-82
MW10	chlorocyclohexane	undetermined	3-30-82
	tetrahydrofuran	undetermined	3-30-82
MW12	N-butylbenzene sulfonamide	undetermined	4-29-82
MW13	tetrahydrofuran	undetermined	3-30-82
MW14	tetrahydrofuran	undetermined	3-30-82
	2 isomers of methyl phenol	undetermined	3-30-82
	an isomer of dimethyl phenol	undetermined	8-18-82
	ethylmethyl phenol	undetermined	8-18-82
MW15	N-butylbenzene sulfonamide	undetermined	4-29-82
	N-butylbenzene sulfonamide	undetermined	8-18-82

NON-PRIORITY COMPOUNDS DETECTED IN GROUNDWATER SAMPLES (Continued)

Well	Compound	Concentration (ppb)	Sampling Date
Stage I Shallow Wells			
16S	tetrahydrofuran	undetermined	6-16-82
17S	an isomer of trichlorobenzene	undetermined	6-16-82
	N-butylbenzene sulfonamide	undetermined	8-17-82
19S	atrazine	undetermined	4-28-82
20S	tetrahydrofuran	undetermined	5-25-82
	oily film of undetermined composition	undetermined	5-25-82
	several alkanes	undetermined	8-11-82
21S	tetrahydrofuran	undetermined	6-15-82
22S	hexahydro-2H-Azepin-2-one	undetermined	6-04-82
	methyl cyclohexane	undetermined	6-04-82
23S	tetrahydrofuran	undetermined	4-28-82
	tetrahydrofuran	undetermined	8-13-82
	atrazine	undetermined	4-28-82
	atrazine	undetermined	8-13-82
24S	pentachlorophenol ^a	undetermined	8-12-82
25S	tetrahydrofuran	undetermined	6-15-82
	N-butylbenzene sulfonamide	undetermined	6-15-82
26S	N-butylbenzene sulfonamide	undetermined	8-11-82
27S	tetrahydrofuran	undetermined	6-16-82
	hexahydro-2H-Azepin-2-one	undetermined	6-16-82
	benzothiazole	undetermined	6-16-82
	a dimethylethyl phenol	undetermined	6-16-82
	pentachlorophenol ^a	undetermined	8-12-82
	N-butylbenzene sulfonamide	undetermined	8-12-82
28S	tetrahydrofuran	undetermined	6-16-82
29S	atrazine	undetermined	4-28-82
	atrazine	undetermined	8-16-82
31	an isomer of trichlorobenzene	undetermined	6-16-82

NON-PRIORITY COMPOUNDS DETECTED IN GROUNDWATER SAMPLES (Continued)

Well	Compound	Concentration (ppb)	Sampling Date
Stage I Deep Wells			
19D	N-butylbenzene sulfonamide	undetermined	4-28-82
20D	N-butylbenzene sulfonamide several alkanes	undetermined	4-28-82
		undetermined	8-11-82
22D	N-butylbenzene sulfonamide	undetermined	4-28-82
23D	N-butylbenzene sulfonamide	undetermined	4-28-82
25D	tetrahydrofuran	undetermined	6-15-82
	N-butylbenzene sulfonamide	undetermined	8-12-82
26D	N-butylbenzene sulfonamide	undetermined	4-28-82
	N-butylbenzene sulfonamide	undetermined	8-11-82
27D	N-butylbenzene sulfonamide	undetermined	4-28-82
	N-butylbenzene sulfonamide	undetermined	8-12-82
28D	tetrahydrofuran	undetermined	6-16-82
29D	N-butylbenzene sulfonamide	undetermined	4-28-82
	atrazine	~100	4-28-82
	atrazine	undetermined	8-16-82
Stage II Shallow Wells			
39S	N-butylbenzene sulfonamide	undetermined	9-14-82
41S	N-butylbenzene sulfonamide	undetermined	9-14-82
44S	N-butylbenzene sulfonamide	undetermined	9-13-82

a Aroclor (a PCB) and pentachlorophenol (an acid compound) are EPA priority pollutants.

APPENDIX N
ANALYTICAL DATA
BUILDING 251 SOIL BORINGS

6/7/82 JEM:SL

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Environmental ScienceCAL LAB NO. 14238-7CLIENT I.D. Boring #1 Depth 15 ft.

	<u>VOLATILES</u>	<u>ug/L or ug/Kg</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8882

PRIORITY POLLUTANT DATA SHEET

CLIENT

Environmental Science

CAL LAB NO. *14723-3*

CLIENT I.D. *Barina 1 15'*

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	<i>ND</i>
22A p-chloro-m-cresol	<i>ND</i>
24A 2-chlorophenol	<i>ND</i>
31A 2,4-dichlorophenol	<i>ND</i>
34A 2,4-dimethylphenol	<i>ND</i>
57A 2-nitrophenol	<i>ND</i>
58A 4-nitrophenol	<i>ND</i>
59A 2,4-dinitrophenol	<i>ND</i>
60A 4,6-dinitro-o-cresol	<i>ND</i>
64A pentachlorophenol	<i>ND</i>
65A phenol	<i>ND</i>

BASE/NEUTRAL COMPOUNDS	
18 acenaphthene	<i>ND</i>
58 benzidine	<i>ND</i>
88 1,2,4-trichlorobenzene	<i>ND</i>
98 hexachlorobenzene	<i>ND</i>
128 hexachloroethane	<i>ND</i>
188 bis(2-chloroethyl)ether	<i>ND</i>
208 2-chloronaphthalene	<i>ND</i>
258 1,2-dichlorobenzene	<i>ND</i>
268 1,3-dichlorobenzene	<i>ND</i>
278 1,4-dichlorobenzene	<i>ND</i>
288 3,3'-dichlorobenzidine	<i>ND</i>
358 2,4-dinitrotoluene	<i>ND</i>
368 2,6-dinitrotoluene	<i>ND</i>
378 1,2-diphenylhydrazine (as azobenzene)	<i>ND</i>
398 fluoranthene	<i>ND</i>
408 4-chlorophenyl phenyl ether	<i>ND</i>

BASE/NEUTRAL COMPOUNDS	ug/L
418 4-bromophenyl phenyl ether	<i>ND</i>
428 bis(2-chloroisopropyl)ether	<i>ND</i>
438 bis(2-chloroethoxy)methane	<i>ND</i>
528 hexachlorobutadiene	<i>ND</i>
538 hexachlorocyclopentadiene	<i>ND</i>
548 isophorone	<i>ND</i>
558 naphthalene	<i>ND</i>
568 nitrobenzene	<i>ND</i>
618 N-nitrosodimethylamine	<i>ND</i>
628 N-nitrosodiphenylamine	<i>ND</i>
638 N-nitrosodi-n-propylamine	<i>ND</i>
668 bis(2-ethylhexyl)phthalate	<i>ND</i>
678 butyl benzyl phthalate	<i>ND</i>
688 di-n-butyl phthalate	<i>ND</i>
698 di-n-octyl phthalate	<i>ND</i>
708 diethyl phthalate	<i>ND</i>
718 dimethyl phthalate	<i>ND</i>
728 benzo(a)anthracene	<i>ND</i>
738 benzo(a)pyrene	<i>ND</i>
748 3,4-benzofluoranthene	<i>ND</i>
758 benzo(k)fluoranthene	<i>ND</i>
768 chrysene	<i>ND</i>
778 acenaphthylene	<i>ND</i>
788 anthracene	<i>ND</i>
798 benzo(ghi)perylene	<i>ND</i>
808 fluorene	<i>ND</i>
818 phenanthrene	<i>ND</i>
828 dibenzo(a,h)anthracene	<i>ND</i>
838 indeno(1,2,3-cd)pyrene	<i>ND</i>
848 pyrene	<i>ND</i>

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Soil Boring #1ES ID E2C777151 6/4-82Aliquot analyzed 12Date Received 6/16-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist L1B

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	1.40
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	2.46
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	1.41
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	1.40
2,4,5,T	0.001	2.03
2,4,5 TP (Silvex)	0.002	0.98
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

METALS REPORT FORM

Sample ID McClellan AFBES ID 820777Boring 1 15'

Aliquot analyzed _____

Date Received 8 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	23.1	
Arsenic	p,h,c,d,o	—	10	137.5	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	1.27	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total 124.0	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	28.0	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	11.1	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.1	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	43.5	
Potassium		10	—		
Selenium	p,h,c,d	—	10	23.7	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	1.50	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	68.20	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

6/7/82 *pmf*

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Fruitieria, Inc. CAL LAB NO. 14735-14
CLIENT I.D. Run #1 20 ft

	<u>VOLATILES</u>	<u>ug/L or ug/Kg</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 10th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-0802

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Service

CAL LAB NO.

14725-4

CLIENT I.D.

P. 1001 20'

ACID COMPOUNDS

ug/L

21A	2,4,6-trichlorophenol	ND
22A	p-chloro-m-cresol	ND
24A	2-chlorophenol	ND
31A	2,4-dichlorophenol	ND
34A	2,4-dimethylphenol	ND
57A	2-nitrophenol	ND
58A	4-nitrophenol	ND
59A	2,4-dinitrophenol	ND
60A	4,6-dinitro-o-cresol	ND
64A	pentachlorophenol	ND
65A	phenol	ND

BASE/NEUTRAL COMPOUNDS

8	acenaphthene	ND
58	benzidine	ND
88	1,2,4-trichlorobenzene	ND
98	hexachlorobenzene	ND
128	hexachloroethane	ND
188	bis(2-chloroethyl)ether	ND
208	2-chloronaphthalene	ND
258	1,2-dichlorobenzene	ND
268	1,3-dichlorobenzene	ND
278	1,4-dichlorobenzene	ND
288	3,3'-dichlorobenzidine	ND
358	2,4-dinitrotoluene	ND
368	2,6-dinitrotoluene	ND
378	1,2-diphenylhydrazine (as azobenzene)	ND
398	fluoranthene	ND
408	4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

ug/L

418	4-bromophenyl phenyl ether	ND
428	bis(2-chloroisopropyl)ether	ND
438	bis(2-chloroethoxy)methane	ND
528	hexachlorobutadiene	ND
538	hexachlorocyclopentadiene	ND
548	isophorone	ND
558	naphthalene	ND
568	nitrobenzene	ND
618	N-nitrosodimethylamine	ND
628	N-nitrosodiphenylamine	ND
638	N-nitrosodi-n-propylamine	ND
668	bis(2-ethylhexyl)phthalate	ND
678	butyl benzyl phthalate	ND
688	di-n-butyl phthalate	ND
698	di-n-octyl phthalate	ND
708	diethyl phthalate	ND
718	dimethyl phthalate	ND
728	benzo(a)anthracene	ND
738	benzo(a)pyrene	ND
748	3,4-benzofluoranthene	ND
758	benzo(k)fluoranthene	ND
768	chrysene	ND
778	acenaphthylene	ND
788	anthracene	ND
798	benzo(ghi)perylene	ND
808	fluorene	ND
818	phenanthrene	ND
828	dibenzo(a,h)anthracene	ND
838	indeno(1,2,3-cd)pyrene	ND
848	pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Soil BoringES ID E26774

#1, 20' 6/4-82, From auger

Aliquot analyzed 12Date Received 6/16-82Detector Used: Coulson, EC Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.57
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	2.11
Endosulfan I	0.005	2.51
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	0.59
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	3.02
2,4,5,T	0.001	0.81
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

METALS REPORT FORM

Sample ID McJellon AFBES ID 720774Boring 1 22'

Aliquot analyzed _____

Date Received 8 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <i>mg/l</i>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	<i>1.75</i>	
Arsenic	p,h,c,d,o	—	10	<i>57.0</i>	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	<i>2.07</i>	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	<i>} total 75.0</i>	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	<i>91</i>	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	<i>11.1</i>	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<i>0.21</i>	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	<i>20.5</i>	
Potassium		10	—		
Selenium	p,h,c,d	—	10	<i>7.5</i>	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	0.35	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	54.0	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

6/7/82 pm:glw

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Environmental ScienceCAL LAB NO. 10722-11CLIENT I.D. #2 12/10/251 15'

	<u>VOLATILES</u>	<u>ug/L or ug/Kg</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT

Engineering Science

CAL LAB NO.

14788-5

CLIENT I.D.

#2 15' Bldg 251

ACID COMPOUNDS

	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS

1B acenaphthene	ND
5B benzidine	ND
8B 1,2,4-trichlorobenzene	ND
9B hexachlorobenzene	ND
12B hexachloroethane	ND
18B bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
25B 1,2-dichlorobenzene	ND
26B 1,3-dichlorobenzene	ND
27B 1,4-dichlorobenzene	ND
28B 3,3'-dichlorobenzidine	ND
35B 2,4-dinitrotoluene	ND
36B 2,6-dinitrotoluene	ND
37B 1,2-diphenylhydrazine (as azobenzene)	ND
39B fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Soil Boring #2

ES ID E20778

15' 6/7-82

Aliquot analyzed 12

Date Received 6/16-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LIB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	1.44
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	1.61
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	2.38
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	1.45
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	0.45
2,4,5,T	0.001	0.067
2,4,5 TP (Silvex)	0.002	0.224
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

METALS REPORT FORM

Sample ID McClellan AFBES ID 800778Boxing 2 15'

Aliquot analyzed _____

Date Received 8 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	3.12	
Arsenic	p,h,c,d,o	—	10	82.5	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	1.32	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total 94.0	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	107.0	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	93.7	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	1.0	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	32.2	
Potassium		10	—		
Selenium	p,h,c,d	—	10	17.2	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	0.92	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	57.2	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

6/7/82 sample

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science CAL LAB NO. 14728-12
CLIENT I.D. #2 20' Bldg 251

<u>VOLATILES</u>		<u>ug/L or ug/Kg</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 14,228-1

CLIENT I.D. 2 10 136257

ACID COMPOUNDS

	ug/L <i>ug/gm</i>
21A 2,4,6-trichlorophenol	ND
22A p-chloro-o-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS

18 acenaphthene	ND
58 benzidine	ND
88 1,2,4-trichlorobenzene	ND
98 hexachlorobenzene	ND
128 hexachloroethane	ND
188 bis(2-chloroethyl)ether	ND
208 2-chloronaphthalene	ND
258 1,2-dichlorobenzene	ND
268 1,3-dichlorobenzene	ND
278 1,4-dichlorobenzene	ND
288 3,3'-dichlorobenzidine	ND
358 2,4-dinitrotoluene	ND
368 2,6-dinitrotoluene	ND
378 1,2-diphenylhydrazine (as azobenzene)	ND
398 fluoranthene	ND
408 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS

	ug/L <i>ug/gm</i>
418 4-bromophenyl phenyl ether	ND
428 bis(2-chloroisopropyl)ether	ND
438 bis(2-chloroethoxy)methane	ND
528 hexachlorobutadiene	ND
538 hexachlorocyclopentadiene	ND
548 isophorone	ND
558 naphthalene	*
568 nitrobenzene	ND
618 N-nitrosodimethylamine	ND
628 N-nitrosodiphenylamine	ND
638 N-nitrosodi-n-propylamine	ND
668 bis(2-ethylhexyl)phthalate	ND
678 butyl benzyl phthalate	ND
688 di-n-butyl phthalate	ND
698 di-n-octyl phthalate	ND
708 diethyl phthalate	ND
718 dimethyl phthalate	ND
728 benzo(a)anthracene	ND
738 benzo(a)pyrene	ND
748 3,4-benzofluoranthene	ND
758 benzo(k)fluoranthene	ND
768 chrysene	ND
778 acenaphthylene	ND
788 anthracene	ND
798 benzo(ghi)perylene	ND
808 fluorene	ND
818 phenanthrene	ND
828 dibenzo(a,h)anthracene	ND
838 indeno(1,2,3-cd)pyrene	ND
848 pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Builing 251ES ID 820777

#2 20'

Aliquot analyzed 12

Date Received _____

Detector Used: Coulson, EC Flame, PID

Date analyzed _____

Chemist MB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	1.60
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	0.70
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	2.10
Endosulfan I	0.005	0.56
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	1.70
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	4.14
2,4,5,T	0.001	1.10
2,4,5 TP (Silvex)	0.002	3.53
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

METALS REPORT FORM

Sample ID McGlellan AFBES ID 820779Baring 2 20'

Aliquot analyzed _____

Date Received 8 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>1000/2</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	3.37	
Arsenic	p,h,c,d,o	—	10	52.5	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	1.00	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total 85.0	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	26.0	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	13.6	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.1	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	28.5	
Potassium		10	—		
Selenium	p,h,c,d	—	10	11.1	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	0.80	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	54.5	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

6/7/82 sample

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering ScienceCAL LAB NO. 14225-13CLIENT I.D. #3 15'

	<u>VOLATILES</u>	<u>ug/L or ug/Kg</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

California Analytical Laboratories, Inc.

401 NORTH 16th STREET
SACRAMENTO, CALIFORNIA 95814
(916) 444-8802

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Service

CAL LAB NO. 14,728-7

CLIENT I.D. Benin 3, 151

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-o-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	ug/L
8 acenaphthene	ND
58 benzidine	ND
88 1,2,4-trichlorobenzene	ND
98 hexachlorobenzene	ND
12B hexachloroethane	ND
188 bis(2-chloroethyl)ether	ND
20B 2-chloronaphthalene	ND
258 1,2-dichlorobenzene	ND
268 1,3-dichlorobenzene	ND
278 1,4-dichlorobenzene	ND
288 3,3'-dichlorobenzidine	ND
358 2,4-dinitrotoluene	ND
368 2,6-dinitrotoluene	ND
378 1,2-diphenylhydrazine (as azobenzene)	ND
398 fluoranthene	ND
40B 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
41B 4-bromophenyl phenyl ether	ND
42B bis(2-chloroisopropyl)ether	ND
43B bis(2-chloroethoxy)methane	ND
52B hexachlorobutadiene	ND
53B hexachlorocyclopentadiene	ND
54B isophorone	ND
55B naphthalene	ND
56B nitrobenzene	ND
61B N-nitrosodimethylamine	ND
62B N-nitrosodiphenylamine	ND
63B N-nitrosodi-n-propylamine	ND
66B bis(2-ethylhexyl)phthalate	ND
67B butyl benzyl phthalate	ND
68B di-n-butyl phthalate	ND
69B di-n-octyl phthalate	ND
70B diethyl phthalate	ND
71B dimethyl phthalate	ND
72B benzo(a)anthracene	ND
73B benzo(a)pyrene	ND
74B 3,4-benzofluoranthene	ND
75B benzo(k)fluoranthene	ND
76B chrysene	ND
77B acenaphthylene	ND
78B anthracene	ND
79B benzo(ghi)perylene	ND
80B fluorene	ND
81B phenanthrene	ND
82B dibenzo(a,h)anthracene	ND
83B indeno(1,2,3-cd)pyrene	ND
84B pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Barung #3ES ID E-2075C15' 6/4-82Aliquot analyzed 12Date Received 6/16-82Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist LHB

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	1.47
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	172
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	0.69
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	2.35
Heptachlor epoxide	0.004	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	2.06
2,4,5,T	0.001	1.87
2,4,5 TP (Silvex)	0.002	480
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

METALS REPORT FORM

Sample ID McClellan AFBES ID 820780Boxing 3 15'

Aliquot analyzed _____

Date Received 8 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>mg/g</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	5.87	
Arsenic	p,h,c,d,o	—	10	80.0	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	0.82	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total 85.0	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	26.0	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	12.4	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.1	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	22.5	
Potassium		10	—		
Selenium	p,h,c,d	—	10	13.5	
Silicon		10	—		

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	1.20	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	53.0	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

6/7/82 sample

California Analytical Laboratories, Inc.

5895 Power Inn Road
Sacramento, California 95824
(916)-381-5105

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science CAL LAB NO. 14731-14
CLIENT I.D. #3, 201

	<u>VOLATILES</u>	<u>ug/L or ug/Kg</u>
2V	acrolein	ND
3V	acrylonitrile	ND
4V	benzene	ND
6V	carbon tetrachloride	ND
7V	chlorobenzene	ND
10V	1,2-dichloroethane	ND
11V	1,1,1-trichloroethane	ND
13V	1,1-dichloroethane	ND
14V	1,1,2-trichloroethane	ND
15V	1,1,2,2-tetrachloroethane	ND
16V	chloroethane	ND
19V	2-chloroethylvinyl ether	ND
23V	chloroform	ND
29V	1,1-dichloroethylene	ND
30V	1,2-trans-dichloroethylene	ND
32V	1,2-dichloropropane	ND
33V	1,3-dichloropropylene	ND
38V	ethylbenzene	ND
44V	methylene chloride	ND
45V	methyl chloride	ND
46V	methyl bromide	ND
47V	bromoform	ND
48V	dichlorobromomethane	ND
49V	trichlorofluoromethane	ND
50V	dichlorodifluoromethane	ND
51V	chlorodibromomethane	ND
85V	tetrachloroethylene	ND
86V	toluene	ND
87V	trichloroethylene	ND
88V	vinyl chloride	ND

ND = Not detected

6/7/82 *single*

California Analytical Laboratories, Inc.

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SACRAMENTO, CALIFORNIA 95814
(916) 444-0807

PRIORITY POLLUTANT DATA SHEET

CLIENT Engineering Science

CAL LAB NO. 4728-8

CLIENT I.D. #3 Draft 20

ACID COMPOUNDS	ug/L
21A 2,4,6-trichlorophenol	ND
22A p-chloro-m-cresol	ND
24A 2-chlorophenol	ND
31A 2,4-dichlorophenol	ND
34A 2,4-dimethylphenol	ND
57A 2-nitrophenol	ND
58A 4-nitrophenol	ND
59A 2,4-dinitrophenol	ND
60A 4,6-dinitro-3-cresol	ND
64A pentachlorophenol	ND
65A phenol	ND

BASE/NEUTRAL COMPOUNDS	
18 acenaphthene	ND
58 benzidine	ND
88 1,2,4-trichlorobenzene	ND
98 hexachlorobenzene	ND
128 hexachloroethane	ND
188 bis(2-chloroethyl)ether	ND
208 2-chloronaphthalene	ND
258 1,2-dichlorobenzene	ND
268 1,3-dichlorobenzene	ND
278 1,4-dichlorobenzene	ND
288 3,3'-dichlorobenzidine	ND
358 2,4-dinitrotoluene	ND
368 2,6-dinitrotoluene	ND
378 1,2-diphenylhydrazine (as azobenzene)	ND
398 fluoranthene	ND
408 4-chlorophenyl phenyl ether	ND

BASE/NEUTRAL COMPOUNDS	ug/L
418 4-bromophenyl phenyl ether	ND
428 bis(2-chloroisopropyl)ether	ND
438 bis(2-chloroethoxy)methane	ND
528 hexachlorobutadiene	ND
538 hexachlorocyclopentadiene	ND
548 isophorone	ND
558 naphthalene	ND
568 nitrobenzene	ND
618 N-nitrosodimethylamine	ND
628 N-nitrosodiphenylamine	ND
638 N-nitrosodi-n-propylamine	ND
668 bis(2-ethylhexyl)phthalate	ND
678 butyl benzyl phthalate	ND
688 di-n-butyl phthalate	ND
698 di-n-octyl phthalate	ND
708 diethyl phthalate	ND
718 dimethyl phthalate	ND
728 benzo(a)anthracene	ND
738 benzo(a)pyrene	ND
748 3,4-benzofluoranthene	ND
758 benzo(k)fluoranthene	ND
768 chrysene	ND
778 acenaphthylene	ND
788 anthracene	ND
798 benzo(ghi)perylene	ND
808 fluorene	ND
818 phenanthrene	ND
828 dibenzo(a,h)anthracene	ND
838 indeno(1,2,3-cd)pyrene	ND
848 pyrene	ND

PESTICIDE/HERBICIDE REPORT FORM

Sample ID Pering #3

ES ID 820781

20' 4-82

Aliquot analyzed 12

Date Received 6/16-82

Detector Used: Coulson, EC, Flame, PID

Date analyzed _____

Chemist L1B

Approved _____

	Detection Limits (ppb)	Found (ppb)
Aldrin	0.003	
Alpha BHC	0.002	
Beta BHC	0.004	
Delta BHC	0.004	
Gamma BHC (lindane)	0.002	1.76
Chlordane	0.04	
DDD (TDE)	0.012	
DDE	0.006	
DDT	0.016	
Dieldrin	0.006	
Endosulfan I	0.005	
Endosulfan II	0.01	
Endosulfan sulfate	0.03	
Endrin	0.009	
Heptachlor	0.002	2.29
Heptachlor epoxide	0.009	
Methoxychlor	0.02	
Toxaphene	0.40	
2,4,D	0.001	2.09
2,4,5,T	0.001	1.18
2,4,5 TP (Silvex)	0.002	
DBCP (Dibromochloro propane)		

ENGINEERING-SCIENCE - BERKELEY LABORATORY

METALS REPORT FORM

Sample ID McClellan AFBES ID 820781Brina 3 20'

Aliquot analyzed _____

Date Received 8 June 1982

Method Used _____

Date analyzed _____

Chemist _____

Approved _____

Element	Code	Detection Limit (ppb)		Detected <small>File #</small>	Limit
		Flame	Flameless		
Aluminum		500	50		
Antimony	p,c	500	10	4.55 *	
Arsenic	p,h,c,d,o	—	10	52.5 *	
Barium	h,c,d	1,000	5		
Beryllium	p,c,				
Cadmium	p,h,c,d,o	5	0.1	1.04 *	
Calcium		50	—		
Chromium (+3)	p,h,c,d,o	20	1	} total 80.5	
Chromium (+6)	c	—	10		
Cobalt		50	1		
Copper	p,c,d,o	20	1	22 *	
Gold		100	1		
Iron	d	100	1		
Lead	p,h,c,d,o	100	10	14.9	
Lithium		50	—		
Magnesium		1	—		
Manganese	d	10	0.5		
Mercury	p,h,c,d,o	—	0.5	<0.1	
Molybdenum	c	500	—		
Nickel	p,c,o	40	1	22.2 *	
Potassium		10	—		
Selenium	p,h,c,d	—	10	10.5 *	
Silicon		10	—		

* Average of quality assurance duplicates.

Element	Code	Detection Limit (ppb)		Detected	Limit
		Flame	Flameless		
Silver	p,h,c,d,o	50	1	0.86 *	
Sodium		10			
Thallium	p,c,				
Tin					
Vanadium	c				
Zinc	p,c,d,o	5	0.05	48.9	

codes: p - EPA priority pollutant
 h - EPA hazardous waste
 c - Ca. Dept. Health Services hazardous waste
 d - EPA drinking water
 o - Ocean waters of California

* Average of quality assurance duplicates.

APPENDIX O
AQUIFER TEST DATA

AQUIFER TESTING DATA

Pg 1/3

PROJECT NAME

RECOVERY

project # 09792

well # 445

PUMPING

location North Highlands, CA

formation tested Shallow aquifer

ground elevation

53.70

elevation of casing

distance from test well

depth of well

12'

screen interval

83'-93'

date test began

9/28/82

time test began

9:30 a.m.

$h_0 = 78.06$

water level indicator

M-Scope

TIME	DEPTH TO WATER (ft)	DRAWDOWN (residual) (ft)	ELAPSED TIME (min) days	$\frac{s}{t}$	REMARKS
15:10	90.58	12.52			pump off
15:10:15	90.16	12.10	1.7×10^{-4}	1.56×10^3	$\frac{s}{t} = \frac{s}{t + 0.27 \text{ days}}$
15:10:45	89.85	11.79	5.2×10^{-4}	5.19×10^2	
11:30	89.08	11.02	1×10^{-3}	2.60×10^2	
11:45	88.79	10.74	1.2×10^{-3}	2.23×10^2	
12:00	88.54	10.48	1.4×10^{-3}	1.95×10^2	
12:15	88.21	10.15	1.5×10^{-3}	1.74×10^2	
12:30	88.04	9.98	1.7×10^{-3}	1.57×10^2	
12:45	87.79	9.73	1.9×10^{-3}	1.42×10^2	
13:15	87.33	9.27	2.2×10^{-3}	1.21×10^2	
13:30	87.08	9.02	2.4×10^{-3}	1.12×10^2	
14:00	86.62	8.56	2.8×10^{-3}	9.82×10^1	
14:30	86.25	8.19	3.1×10^{-3}	8.74×10^1	
15:00	85.79	7.73	3.5×10^{-3}	7.88×10^1	
15:30	85.42	7.36	3.8×10^{-3}	7.17×10^1	
16:00	84.96	6.90	4.2×10^{-3}	6.58×10^1	
16:30	84.46	6.40	4.5×10^{-3}	6.08×10^1	
17:00	84.04	5.98	4.9×10^{-3}	5.65×10^1	
17:30	83.58	5.52	5.2×10^{-3}	5.28×10^1	
18:00	83.21	5.15	5.6×10^{-3}	4.96×10^1	
18:30	82.85	4.79	5.9×10^{-3}	4.67×10^1	
19:00	82.48	4.42	6.3×10^{-3}	4.42×10^1	
19:30	82.16	4.10	6.6×10^{-3}	4.19×10^1	
20:00	81.85	3.79	6.9×10^{-3}	3.99×10^1	
20:30	81.56	3.50	7.3×10^{-3}	3.80×10^1	

ENGINEERING-SCIENCE

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OFFICES IN PRINCIPAL CITIES

ES

AQUIFER TESTING DATA

Pg 2/3

PROJECT NAME _____

RECOVERY X

project # _____

well # 445

PUMPING _____

location _____

formation tested _____ ground elevation _____ elevation of casing _____

distance from test well _____ depth of well _____ screen interval _____

date test began _____ time test began _____

water level indicator _____

TIME	DEPTH TO WATER (ft)	DRAWDOWN (residual) (ft)	ELAPSED TIME (min)	t/t'	REMARKS
15:21:00	81.29	3.23	7.6×10^{-3}	$3.63 \times 10'$	
21:30	81.02	2.96	8.0×10^{-3}	$3.48 \times 10'$	
22:00	80.77	2.71	8.3×10^{-3}	$3.34 \times 10'$	
22:30	80.56	2.50	8.7×10^{-3}	$3.21 \times 10'$	
23:00	80.36	2.30	9.0×10^{-3}	$3.09 \times 10'$	
23:30	80.16	2.10	9.4×10^{-3}	$2.98 \times 10'$	
24:00	80.00	1.94	9.7×10^{-3}	$2.88 \times 10'$	
24:30	79.83	1.77	1.01×10^{-2}	$2.78 \times 10'$	
25:00	79.67	1.61	1.04×10^{-2}	$2.69 \times 10'$	
25:30	79.53	1.47	1.08×10^{-2}	$2.61 \times 10'$	
26:00	79.40	1.34	1.11×10^{-2}	$2.53 \times 10'$	
26:30	79.28	1.22	1.15×10^{-2}	$2.46 \times 10'$	
27:00	79.17	1.11	1.18×10^{-2}	$2.39 \times 10'$	
27:30	79.08	1.02	1.22×10^{-2}	$2.32 \times 10'$	
28:00	78.98	0.92	1.25×10^{-2}	$2.26 \times 10'$	
28:30	—	—	—	—	
29:00	78.80	0.74	1.32×10^{-2}	$2.15 \times 10'$	
29:30	78.74	0.68	1.35×10^{-2}	$2.09 \times 10'$	
30:00	78.67	0.61	1.39×10^{-2}	$2.04 \times 10'$	
30:30	78.61	0.55	1.42×10^{-2}	$2.00 \times 10'$	
31:00	78.54	0.48	1.46×10^{-2}	$1.95 \times 10'$	
31:30	78.51	0.45	1.49×10^{-2}	$1.91 \times 10'$	
32:00	78.46	0.40	1.53×10^{-2}	$1.87 \times 10'$	
33:00	78.37	0.31	1.60×10^{-2}	$1.79 \times 10'$	
34:00	78.31	0.25	1.67×10^{-2}	$1.72 \times 10'$	

ENGINEERING-SCIENCE

DESIGN • RESEARCH • PLANNING

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OFFICES IN PRINCIPAL CITIES

ES

Pg 3/3

RECOVERY

445

PUMPING

formation tested

ground elevation

elevation of casing

distance from test well

depth of well

screen interval

date test began

time test began

water level indicator

END OF RECOVERY TEST

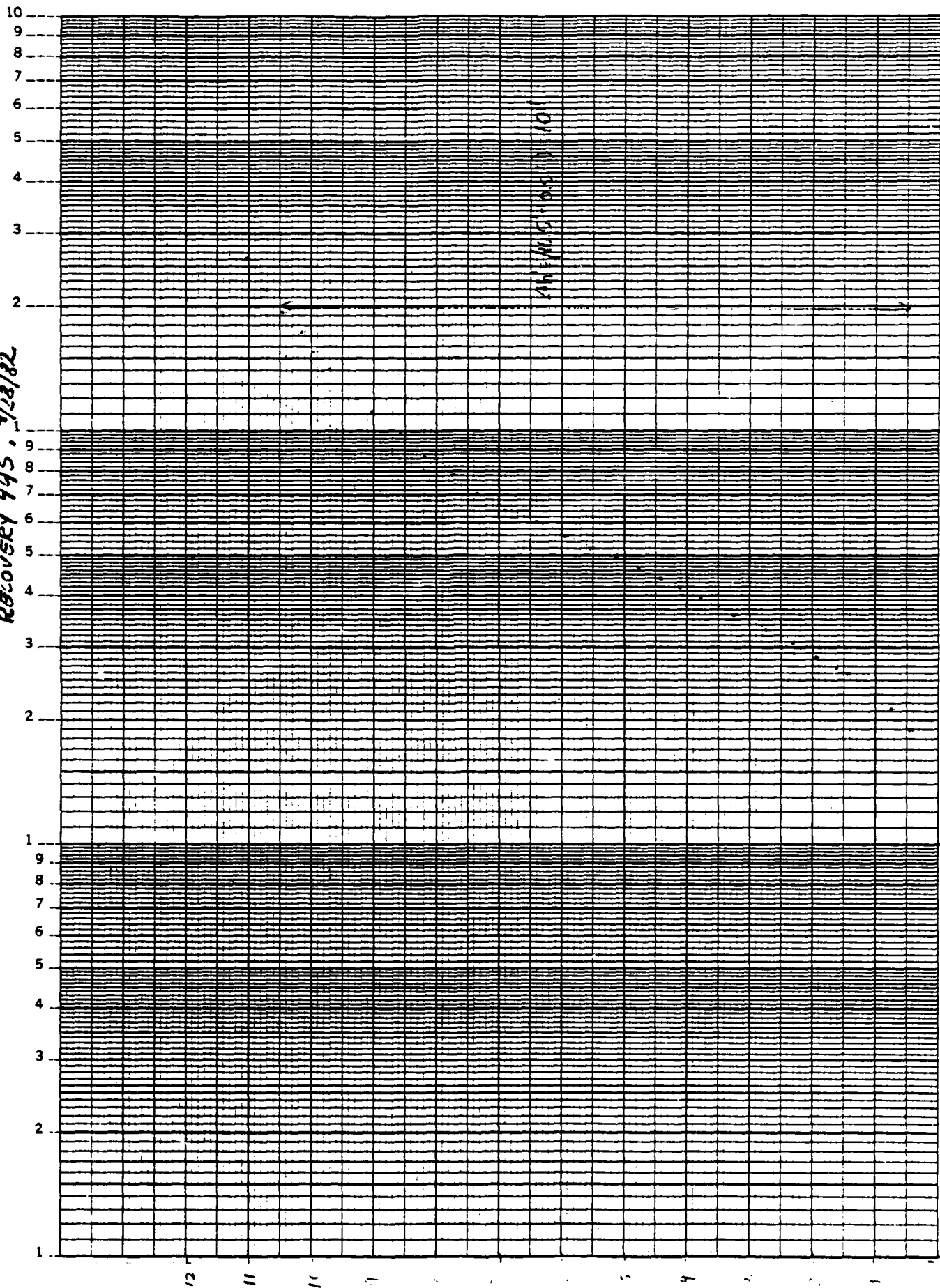
OFFICES IN PRINCIPAL CITIES

ES

K-E SEMI-LOGARITHMIC 3 CYCLES x 140 DIVISIONS
HEUFFEL & ESSER CO. MADE IN U.S.A.

46 5810

RECOVERY 445, 9/23/82



ANEMOMETER

Test Date: 9/23/82
Well #: 245
Test: Slug

AQUIFER TESTING DATA

3

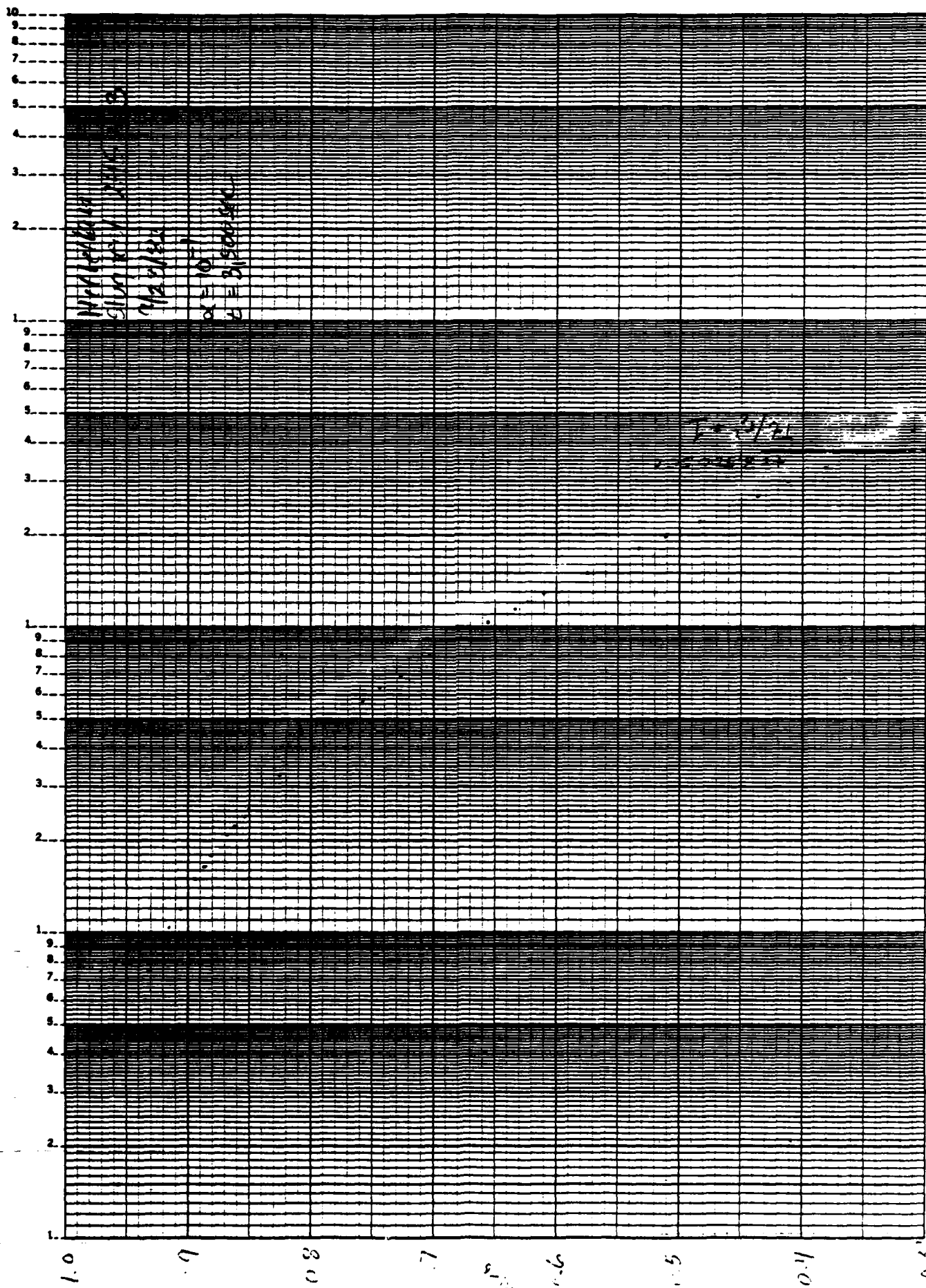
2	1	2	3	2	1	2	3
Elapsed Time (sec)	Depth to Water (ft)	H	H/H ₀	Elapsed Time (sec)	Depth to Water (ft)	H	H/H ₀
15	3.67	86.33	0.959	660	23.67	65.5	0.728
45	4.75	85.25	0.947	690	24.50		
60	5.58	84.42	0.938	720	25.00		
75	6.17	83.83	0.931	750	25.67		
90	7.08	82.92	0.921	780	26.50	63.17	0.702
105	7.67	82.33	0.915	810	26.83		
120	8.33	81.67	0.907	840	27.50		
150	9.58	80.42	0.894	870	28.08		
165	10.17	79.83	0.887	900	28.67	60.92	0.678
180	10.75	79.25	0.881	930	29.08		
210	11.75	78.25	0.868	960	29.67		
225	12.33	77.67	0.863	990	30.25		
240	12.95	77.25	0.853	1020	30.75	58.83	0.654
255	13.33	76.67	0.852	1050	31.17		
270	13.75			1080	31.75		
285	14.25			1110	32.42		
300	14.75			1140	32.92	57.08	0.634
330	15.50	74.40	0.827	1170	33.42	56.00	0.622
360	16.33			1200	34.00		
390	17.25			1230	34.60		
420	18.00			1260	34.83		
450	18.75			1290	35.08	54.92	0.610
480	19.50	70.1	0.779	1320	35.67	51.67	0.574
510	20.33			1380	36.30		
540	20.92			1440	37.42		
570	21.67	68.33	0.759	1500	38.33		
600	22.42			1560	39.00		
630	23.08	66.92	0.744	1620	39.92		

Test Date 9/23/82
Well # 245
Test : Slug

AQUIFER TESTING DATA
#3

2	1	2	3	2	1	2	3
Elapsed Time (SEC)	Depth to Water (FT)	H	H/H ₀	Elapsed Time (SEC)	Depth to Water (FT)	H	H/H ₀
1680	40.58			3360	55.60	34.4	0.382
1740	41.33			3420	55.92		
1800	41.92	48.08	0.534	3480	56.33		
1860	42.50			3540	56.75		
1920	43.08			3600	57.08		
1980	44.00	46.0	0.571	3720	57.83	32.17	0.357
2040	44.58			3840	58.50		
2100	45.33			3960	59.33		
2160	45.83			4080	59.92		
2220	46.50	43.5	0.483	4200	60.58		
2280	47.00			4320	61.42		
2340	47.50			4440	62.00	28.00	0.311
2400	48.00			4560	62.50		
2460	48.58			4680	63.08	-	
2520	49.12			4800	63.75		
2580	49.58			4920	64.42		
2640	50.08			5040	65.08		
2700	50.50	39.5	0.439	5160	65.58		
2760	51.08			5280	66.08	23.92	0.266
2820	51.58			5400	66.58		
2880	52.00			5520	67.12		
2940	52.42			5640	67.75		
3000	52.92	37.08	0.412	5760	68.08		
3060	53.33			5880	68.58		
3120	53.75			6000	69.00	21.00	0.233
3180	54.25			6120	69.50		
3240	54.75			6360	69.92		
3300	55.00			10800	81.17		

END OF TEST



Test Date : 9/22/82

Well # 245

Test : Slug

H₀ : 87.7'

SLUG TEST AQUIFER TESTING DATA

#2

2	1	2	3	2	1	2	3
Elapsed Time (sec)	Depth to Water (ft)	H (87.7-1)	H/H ₀	Elapsed Time (sec)	Depth to Water (ft)	H (87.7-1)	H/H ₀
15	1.30	86.40	0.985	480	19.75		
30	2.25	85.45	0.974	495	18.17		
45	3.00			510	18.58	69.12	0.788
60	3.67	84.03	0.958	525	18.92		
75	4.25			540	19.25		
90	5.00	82.70	0.943	590	20.00	67.70	0.772
105	5.50			600	20.75		
120	6.33			630	21.50		
135	6.75	80.95	0.923	660	22.25	65.45	0.746
150	7.25			690	23.00		
180	8.25	79.45	0.906	720	23.75		
195	8.75			750	24.42	63.28	0.722
210	9.33			780	25.08		
225	9.92	77.78	0.887	810	25.75		
240	10.50			840	26.42	61.28	0.699
255	10.92			870	27.00		
285	11.92	75.78	0.864	900	27.67		
315	12.75			930	28.17	59.53	0.679
330	13.42			960	28.83		
360	14.17	73.53	0.838	990	29.42		
375	14.67			1020	-		
390	15.17			1050	30.50	57.20	0.652
405	15.50	72.20	0.823	1080	31.17		
420	15.92			1110	31.67		
435	16.42			1140	32.33	55.37	0.631
450	16.83	70.87	0.807	1170	32.75		
465	17.33			1200	33.25	54.45	0.620

Test Date: 9/22/82
Well # 245
Test 5/09
Ho 87.7 ft

AQUIFER TESTING DATA

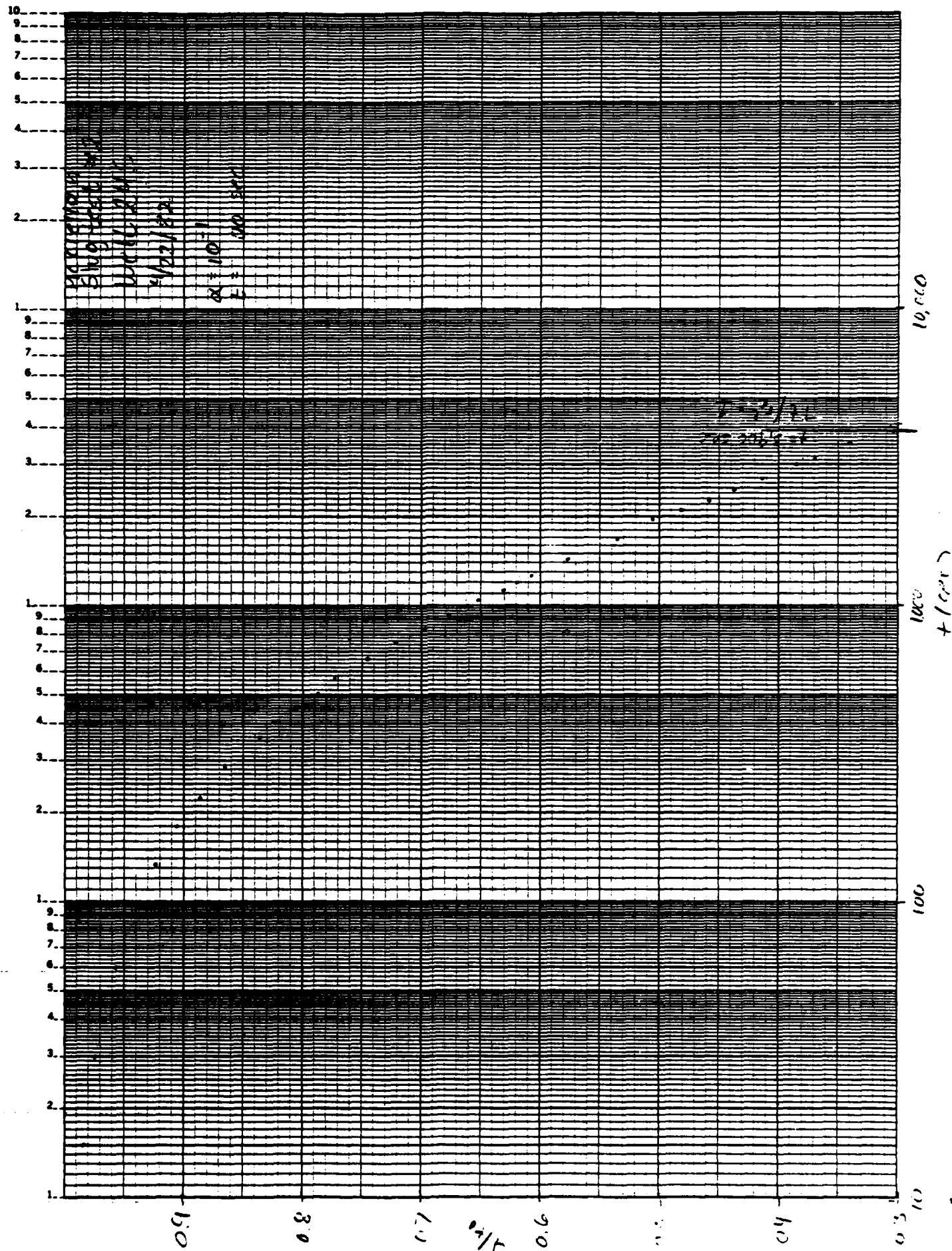
#2

0	1	2	3	0	1	2	3
Elapsed Time (sec)	Depth to Water (ft)	H (87.7-1)	H/H ₀	Elapsed Time (sec)	Depth to Water (ft)	H (87.7-1)	H/H ₀
1230	33.95			2820	52.00		
1260	34.25	53.45	0.609	2880	52.42		
1320	35.14			2940	52.92		
1380	36.00			3000	53.50	34.20	0.386
1440	37.00	50.70	0.577	3060	53.75		
1500	38.00			3120	54.25		
1560	38.83			3180	54.83	32.87	0.370
1620	39.64			3240	55.25		
1680	40.50	47.20	0.536	3300	55.75		
1740	41.14			3420	56.50		
1800	41.83			3540	59.42	30.28	0.340
1860	42.58			3660	58.00		
1920	43.25	44.45	0.504	3780	58.83		
1980	44.00			3900	59.67		
2040	44.58			4020	60.42	27.28	0.306
2100	45.25	42.45	0.481	4140	61.00		
2160	45.83			4260	61.67		
2220	46.50			4380	62.33		
2280	47.14	40.53	0.459	4500	63.00		
2340	48.14			4800	64.58		
2400	48.50			5100	65.92		
2460	48.92	38.78	0.439	5400	67.33		
2520	49.48			5700	68.58		
2580	49.75			6000	69.67		
2640	50.33			6300	70.67		
2700	51.08	36.62	0.414	6600	71.67		
2760	51.42			6900	72.75		
				10800	81.25		

END OF TEST

K σ E SEMI-LOGARITHMIC 4 CYCLES X 70 DIVISIONS
KELFTEL & EMMER CO. MADE IN U.S.A.

46 6010



APPENDIX P

**SAMPLING PROCEDURES AND FIELD DATA SHEETS
FOR GROUNDWATER MONITORING WELLS
AND BASE PRODUCTION WELLS**

APPENDIX P

SAMPLING PROCEDURES FOR GROUNDWATER MONITORING WELLS AND BASE PRODUCTION WELLS McClellan AFB, California

Read the entire sampling procedure before sampling.

1. Unlock the iron casing cap. For multiple-completion wells, determine which well is shallow and which is deep. Each PVC casing is labeled either "S" or "D".
2. Take a static water level measurement to within 1/10 inch.
3. Arrange sampling bottles for the well to be sampled:
 - 1-gallon bottle for GC/MS
 - 1-gallon bottle for herbicides/pesticides/metals
 - 1 VOA bottle for volatiles
 - 1 polyethylene bottle for cyanides
 - 1 glass bottle for cresylic acid, PCB's, or aliphatics (if applicable)
4. Label sampling bottles:
 - McClellan AFB
 - Well number (e.g., 16S)
 - Date
 - Type of analysis to be performed
 - Initials of person sampling
5. Set up rinse containers for the sampler and bailer:
 - Place three 5-gallon buckets near the well to be sampled.
 - Label the buckets "First Rinse", "Acetone", and "Final Rinse".
 - Fill the buckets labeled "First Rinse" and "Final Rinse" half full with deionized water, and the bucket labeled "Acetone" one-quarter full of acetone. Keep lids on the buckets when not used for rinsing.

6. Wear neoprene gloves at all times during sampling and avoid skin contact with the well water. Thoroughly wash skin or clothing that came in contact with well water. When removing the caps from the well casings and during sampling, do not breathe directly over the well.
7. Place the tripod over the well to be sampled. Attach the pump to the steel cable on the tripod. Strong nylon rope (3/8 inch) may be used instead of the tripod and cable if the pump is to be lowered into and raised from the well by hand. Lower the pump into the well to a depth of about 10 feet below the water surface. In shallow wells, lower the pump almost to the bottom of the well. Avoid kinks in the Teflon tubing as the pump is being lowered.
8. Place the generator near the well in a place that will avoid fire danger from the exhaust. Connect the pump to the generator. Turn the generator on.
9. If water is being discharged from the Teflon tubing, proceed to Step 10. If no water is being discharged, as may happen in shallow or silted wells, remove the pump and sample the well by bailing. For bailing, remove about one well volume of water from the well. (For 4-inch wells, 1 foot of water is approximately equivalent to 1/2 gallon.)

Sample the well with a glass/Teflon or all-Teflon sampler and pour the water into the respective bottles arranged in Step 4. A glass funnel may be used when pouring water into bottles. The VOA bottle must not contain air bubbles; turn the bottle upside down for visual inspection of the sample. Place the samples in an ice chest.

Rinse the sampler and bailer in the buckets arranged in Step 5. Also clean the part of the cord that was submerged in the well water with the sampler. Take a final water level to within 1/10 inch. Recap the well, lock the iron casing, and proceed to the next well.

10. Well water is being discharged from the Teflon tubing. Direct the water into an empty 5-gallon bucket and estimate the pumping rate

in gallons per minute based upon the time required to fill the bucket.

11. Continue pumping until 4 well volumes have been removed (1 foot of water in 4-inch well is about 1/2 gallon).
12. Collect samples in sampling bottles directly from the Teflon tubing. The VOA bottle must not contain air bubbles; turn the bottle upside down to visually ensure that no air is present.
13. Place all samples in an ice chest.
14. Turn off the generator, remove the pump, and take final water level to within 1/10 inch. Recap the well, lock the iron casing, and proceed to the next well until all wells have been sampled.
15. Keep accurate notes on procedures employed and on all data collected by completing the attached form for each well.

SAMPLING OF MONITORING WELLS
McClellan AFB, California

Well #	Date Sampled	Sampling Procedure	Water Level Before Sampling	Water Level After Sampling	Depth of Well	Well Volumes Removed (Q)	Pump Flow Rate	Samples Collected					Comments
								GC/MS	VOA	Pest/Herb	Cres Acid	PCB	

CALCULATION OF CASING VOLUME
FOR MONITORING WELL PURGING
AND SAMPLING

CALCULATION OF CASING VOLUME

Prior to withdrawing samples, the stagnant water in the well must be removed. Usually this will involve removing one to three casing volumes (the amount of water standing in the well prior to purging).

To calculate the casing volume:

1. Measure depth to water (inches).
2. Measure depth of well (inches), or obtain from records.
3. Calculate water depth (well depth - depth to water).
4. Measure diameter of well casing (inches).
5. Calculate casing volume (V):

$$V \text{ (cu in)} = \pi \frac{(\text{casing diameter})^2}{4} \times \text{depth of water}$$

$$V \text{ (gal)} = (\text{cu in}) \times 0.0043 \text{ gal/cu in}$$

Example:

For a 20-foot well (from top of casing) with a water level 9 feet below the top of the casing and a diameter of 2 inches, calculate the casing volume.

$$V \text{ (cu in)} = \pi \frac{(2.0 \text{ in})^2}{4} \times (11 \text{ ft} \times 12 \text{ in/ft}) = 414.7 \text{ cu in}$$

$$V \text{ (gal)} = 414.7 \text{ cu in} \times 0.0043 \text{ gal/cu in} = 1.8 \text{ gal}$$

SLUG TEST DATA SHEET

H_0 : Initial water level
(from ground surface) _____

Date _____

Well # _____

Casing Elevation: _____

Test # _____

Analyst _____

Time	Elapsed Time (sec)	Depth to Water from Top of Casing (ft)	H = Depth to Water from Ground Level (ft)	H/H_0
------	--------------------------	---	--	---------

Q's PUMP TEST

Date _____

Well # _____

Analyst _____

a	b	c	d
Time	Flow Interval	Rate of Flow	Total Flow (gallons) (b x c)

PUMP TEST DATA SHEET

H_o : Initial water level
(from ground surface) _____

Date _____

Well # _____

Casing elevation: _____

Analyst _____

	t = Elapsed Time (days)	Depth to Water from Top of Casing (ft)	H = Depth to Water from Ground Level (ft)	Residual Drawdown ($H_o - H$)	t/t'
Time					

$$t/t' = \frac{t' + t}{t'}$$

t = total time pumped

t' = elapsed time since recovery started

APPENDIX Q

**FIELD AND SAMPLING EQUIPMENT
AND BAILER SELECTION**

APPENDIX Q

FIELD AND SAMPLING EQUIPMENT AND BAILER SELECTION

FIELD AND SAMPLING EQUIPMENT

<u>Item</u>	<u>Use</u>
1. Well padlock key	Unlock well lock
2. 3-inch (OD) submersible pump (Standard Pump Co., Bardlesville, Oak)	Well pumping
3. Effluent hose, Teflon-lined, attached to pump	Well sampling
4. 175 feet of 3/8 inch nylon rope and/or	Support pump when lowering and raising pump into and from well
5. Tripod	
6. Electronic water-level indicator (battery powered) (Well sounder, Electric Products Co., Fresno, CA)	Water-level readings
7. 10-foot steel measuring tape (1/16-inch calibration)	Measurement of water level
8. 3500-watt generator	Electrical current for pump
9. 5 gallon buckets (3)	Sampler rinsing
10. 5 gallon "Jerry Jugs" (10)	Carrying DI water
11. Teflon/glass samplers (2)	Well sampling
12. All-Teflon sampler	Well sampling
13. Sample containers (per sample)	Sample collection
(a) 1-gallon glass bottle	GC/MS
(b) 1-gallon glass bottle	Herbicide/pesticide/metals
(c) 2 VOA bottles	Volatiles
(d) 1-quart polyethylene bottle	Cyanide
(e) 1-quart glass bottle	Cresylic acid, PCB's, or aliphatics

<u>Item</u>	<u>Use</u>
14. Glass funnels (wide mouth)	Transfer of sample from sampler to sample containers
15. Sample bottle labels	Labeling bottles
16. Deionized water	Rinsing samplers and bailer between samples
17. Acetone	Rinsing/decontaminating samplers between samples
18. Neoprene gloves	Avoid skin contact with water
19. Leather gloves	Pulling rope when removing pump
20. Bailer (1200-ml capacity)	Bailing wells prior to sampling
21. 175 feet of 3/16-inch nylon rope	Rope support for bailing and sampling
22. Stopwatch or watch with second hand	Timing flow rate
23. Ice chests (containing ice)	Storing samples
24. Non-water soluble felt marker	Labeling sample bottle labels (#15 above)
25. Well data sheets	Recording well data
26. Bottle brushes	Cleaning samplers and bailers between sampling
27. Sodium hydroxide (reagent grade) pellets	Preservative for cyanide samples
28. Squirt bottle	Rinsing sampler with acetone

ADDITIONAL USEFUL EQUIPMENT

<u>Item</u>	<u>Use</u>
Pipe wrenches (two)	Screw drivers
Electrical tape	Extra rope
Electrical wire	Extra samplers and bailers
Flashlight	Well cap puller
Mirror	Wire stripper
Extension cord	Knife
Gasoline and can	Miscellaneous pipe fittings
Motor oil	Size AA batteries (water-level meter)
Pliers	Plastic funnel

BAILER SELECTION

Three types of bailers are available for well sampling and well purging. The bailer material to be used should be based on the following considerations.

Utilize PVC bailer when:

- No information is available regarding suspected or known contamination.
- Heavy metal contamination is suspected or known to exist, and organic contaminants are suspected or known not to exist.

Utilize stainless steel bailer when:

- Organic contamination is known to exist, and heavy metal contamination is known or suspected not to exist.

Utilize a Teflon bailer when:

- Highly suspect areas for contamination exist.
- Known organic and heavy metal contamination exist.
- Acid-water conditions are known or suspected.

FIELD EQUIPMENT FOR PUMP AND SLUG TESTS

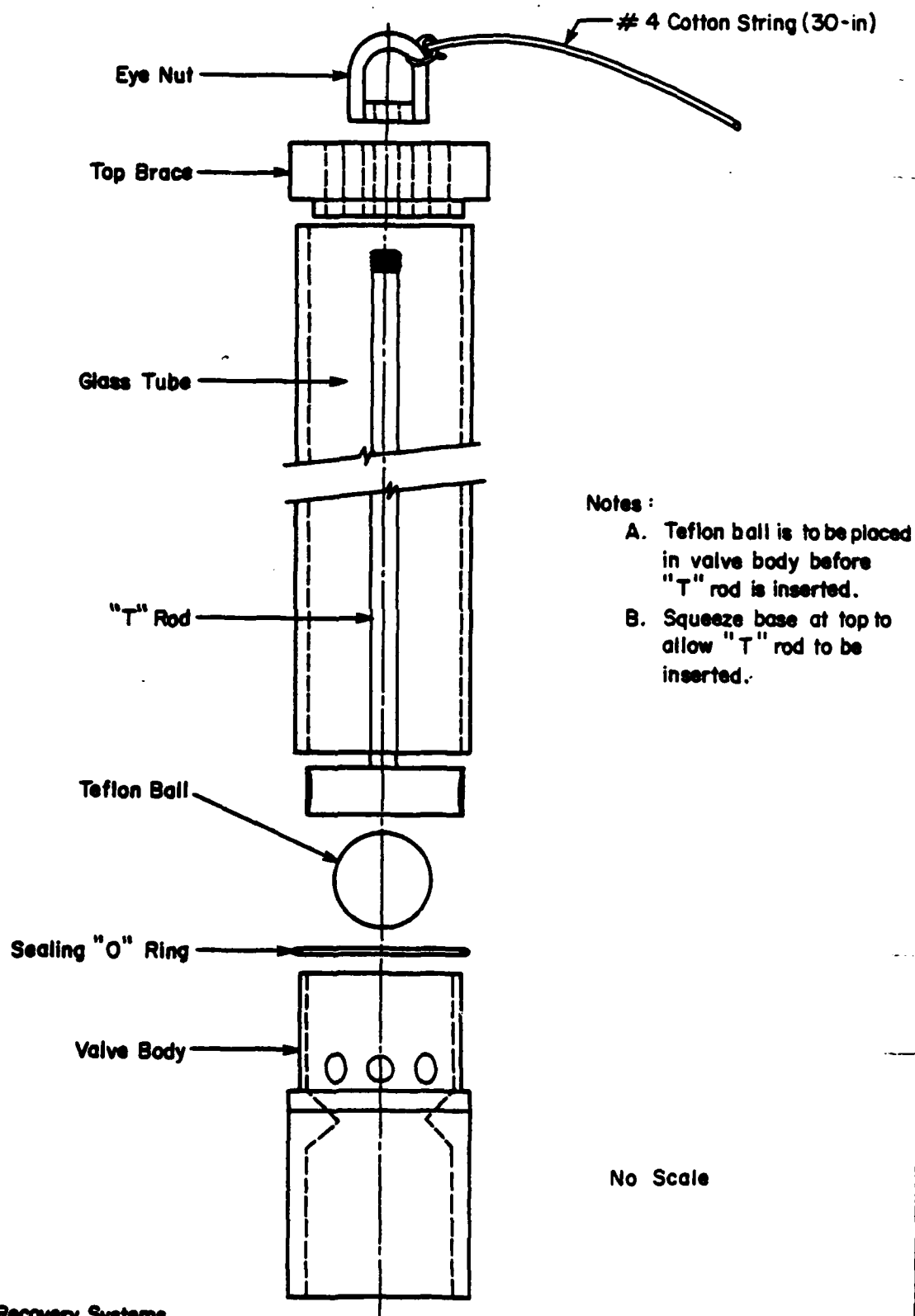
Pump Test

1. Submersible pump with attached effluent hose
2. 3/8-inch nylon rope
3. Electronic water-level meters (three)
4. 10-foot steel measuring tape
5. 3500-watt generator
6. 5-gallon bucket
7. Leather gloves
8. Clock with second hand
9. Data sheets
10. Gasoline, can, and funnel

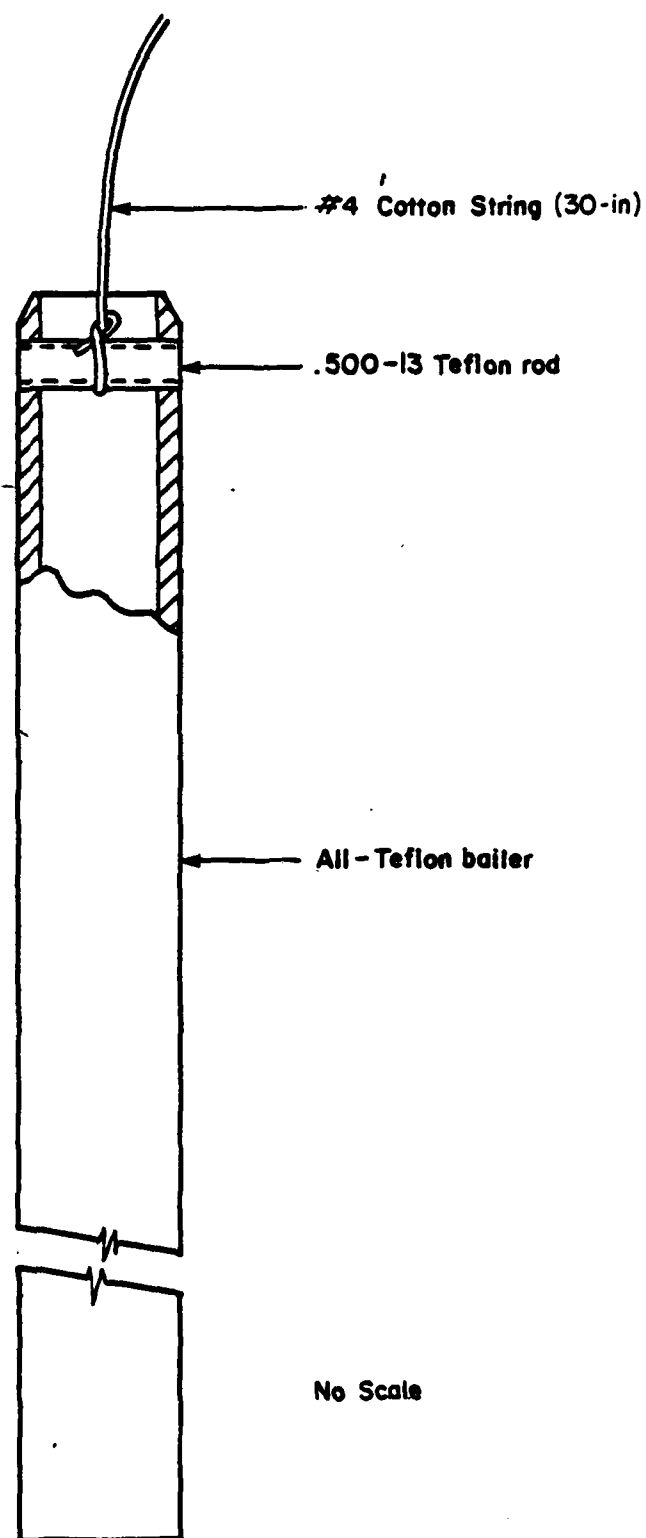
Slug Tests

1. Two plastic 55-gallon drums, modified with a 3-inch flexible hose attached at the base (outlet with door valve)
2. Electronic water-level meter
3. 10-foot steel measuring tape
4. Clock with second hand
5. Data sheets

GLASS AND TEFLON SAMPLER



ALL - TEFLON SAMPLER



Source: Oil Recovery Systems
Drawing No. ORJ-235-1,
1982

APPENDIX R

EQUIPMENT AND ENTRY PROCEDURES FOR
INDUSTRIAL WASTE LINE INVESTIGATION

SAFETY EQUIPMENT

<u>Item</u>	<u>Number</u>
1. Air line mask and 5-minute egress bottle	3
2. Air hose (50-foot)	3
3. Air cylinders (150-minute capacity each)	6
4. Egress bottle fill hose	1
5. Air cylinder regulator with Y-connector	1
6. Gastech 1214 Combustible Gas and O ₂ Meter	1
7. Gas detector pump	1
8. Gas detector ampules, 20 each for CO, H ₂ S, HCN, toluene, benzene	20 each
9. 30-minute emergency air pack	1
10. 10,500-cfm, 110-V explosion-proof fan	2
11. Contractor's first aid kit (1 to 15 employees)	1
12. Fire hose/nozzle/hydrant wrench/T-handle	1
13. Body harness and life line	2
14. Rain suits/gloves/boots/hard hats (sets)	3
15. 500-cfm, 12-V fan and trunk	1
16. Explosion-proof flashlights	2

LOW-PRESSURE AIR TEST AND MISCELLANEOUS EQUIPMENT

1. Compressor/adaptor/hose
2. Test panel with gages
3. 500-ft hose reel and air winch
4. Winch and pulley
5. Inflatable plugs, 4-inch through 20-inch (2 each)
6. Wayne balls, 4-inch through 20-inch (1 each)
7. Heavy rope, 600 feet
8. Light ropes, 400 feet and 100 feet
9. Twine, 400 feet
10. Pick, crowbar, shovel
11. Ladders, 14-foot (2)
12. Inspection mirror
13. Assorted 2"x4"s for bracing, etc.
14. Miscellaneous tools and saw

INDUSTRIAL SEWER ENTRY PROCEDURE

- I. The only ES personnel entering the industrial sewer manholes shall be Steve Deering, except for emergency assistance. He has obtained a medical examination including: medical history, pulmonary function test, chest X-ray, EKG, and a positive health statement by the examining physician. A copy of the statement is attached. The medical examination is in conformance with CAL/OSHA requirements (Cal/OSHA, 1981).
- II. Prior to entry to any manholes, the following procedures shall be followed:
 - A. Shut down and tag pumps (and starters) in Lift Station at Building 243B. Close discharge gate valves.
 - B. A fire hose with nozzle will be connected to a fire hydrant and be stand-by ready. Power for ventilation will be stand-by ready.
 - C. Steve Deering will be outfitted with rubber boots, rain suit, rubber gloves, hard hat, respiratory equipment (bottled air supply, plus 5-minute egress bottle), body harness with life line, and hard hat.
 - D. The sewer will be opened and prior to ventilation will be tested for: lower explosive limit (LEL), HCN, H₂S, toluene, benzene, and CO.
 - E. The sewer will then be ventilated and retested for any earlier positive tests. Hazards will then be discussed.
 - F. Steve Deering may then enter the sewer by ladder and proceed with low-pressure air test procedures.
 - G. One safety person shall be in constant visual contact with Steve Deering and with a second outside person and shall be prepared to assist him in leaving the sewer.
 - H. A continuous LEL and O₂ deficiency monitor with audio alarm will remain in the sewer work area at all times while occupied.

AD-A133 006 INSTALLATION RESTORATION PROGRAM PHASE II CONFIRMATION 8/8
MCCLELLAN AFB CALIFORNIA VOLUME 2(U)
ENGINEERING-SCIENCE INC ARCADIA CALIF JUN 83
UNCLASSIFIED F33615-80-D-4001 F/G 13/2 NL



CHARLES E. GRAHAM, M. D.
530 LOMAS SANTA FE DRIVE
SOLANA BEACH, CALIFORNIA, 92075

To: Engineering Science.

January 13, 1982

Mr. Stephen Deering received a general medical exam with me and was found to be in good health, free of any detectable illness. A health history was negative and a general exam was also.

A chest X-ray was normal. An ECG and urinalysis were also normal. Vital capacity was normal.

Charles E. Graham MD

APPENDIX S

ANALYTICAL PROCEDURES

APPENDIX S
ANALYTICAL PROCEDURES

PESTICIDES

Organochlorine pesticides were determined according to procedures described in EPA Guidelines Establishing Test Procedures for the Analyses of Pollutants, Method 608. A 1-liter aliquot of the water was extracted with methylene chloride, dried, concentrated to a 10-ml volume, and analyzed by GC/ECD.

HERBICIDES

Chlorinated phenoxy herbicides (2,4-D, 2,4,5-T, and 2,4,5-TP Silvex) were determined according to procedures described in Standard Methods for Examination of Water and Wastewater. A 1-liter acidified sample was extracted with ether, hydrolyzed, esterified using boron trifluoride, and analyzed according to the procedure described in the Federal Register, Vol. 30 (75), Pt. II for NPDES.

TRICHLOROETHYLENE (TCE)

Analysis for TCE was by purge and trap, GC/Coulson according to EPA Method 601 found in the Federal Register, Vol. 44 (233).

PRIORITY POLLUTANTS

Samples were analyzed for volatile and extractable priority pollutants by EPA Methods 624 and 625, using gas chromatography/mass spectroscopy (GC/MS). Non-priority pollutants were also detected during analysis, and identified using a computer library search.

POLYCHLORINATED BIPHENYLS (PCB's)

Polychlorinated biphenyls (PCB's) were determined according to procedures described in EPA Guidelines Establishing Test Procedures for the Analyses of Pollutants, Method 608. A 1-liter aliquot of the water was extracted with methylene chloride, dried, concentrated to a 10-ml volume, and analyzed by GC/ECD.

METALS

Metals were analyzed in acidified solutions using atomic absorption spectrophotometry. Methodology used was according to EPA Methodology for Chemical Analyses of Water and Wastes. Direct sample aspiration and analysis by flame was performed for seven metals (Cd, Cr, Cu, Pb, Ni, Ag, and Zn). Flameless techniques (graphite furnace) were used for Sb, As, and Se. Mercury was analyzed by the cold vapor technique.

ALIPHATICS

Aliphatics (oil and grease) were determined according to the procedures described in Standard Methods for Examination of Water and Wastewater (SM 503A). "Oil and grease" by definition is any material recovered as a substance soluble in trichlorotrifluoroethane. A 1-liter sample was acidified and successively extracted with trichlorotrifluoroethane. Combined extracts were distilled, dried over vacuum, cooled, and weighed.

CRESYLIC ACID

Samples analyzed for cresylic acid were concentrated (1 l → 4 ml) using methodology modified from EPA Guidelines Establishing Test Procedures for the Analyses of Pollutants, Method 608. Five-microliter volumes were injected into a gas chromatograph equipped with a flame ionization detector. Column packing was 81/100 CARBOPACK C/0.1 percent SP 100. Results were compared with appropriate cresylic acid standards (ultra-high purity standards) injected using the same conditions.

CYANIDE

Cyanides (CN^-) were determined according to the procedures described in Standard Methods for Examination of Water and Wastewater (SM 412D). Cyanide concentrations are determined colorimetrically and compared with appropriate CN^- standards. CN^- in alkaline solution is converted to CNCI by reaction with chloramine-T at $\text{pH} < 8$. After the reaction is complete, CNCI forms a red-blue dye on addition of a pyridine-barbituric acid reagent. The absorbance of light is read at 578 nm.

APPENDIX T

EXTRACTION WELL DISCHARGE CALCULATIONS

APPENDIX T

EXTRACTION WELL DISCHARGE CALCULATIONS

For an unconfined aquifer, and applying Dupuit's assumptions to the Thiem equation (Todd, 1966), the discharge from a well would be:

$$Q = \pi K \frac{h_o^2 - h_w^2}{\ln(r_o/r_w)}$$

where:

- Q = discharge
- K = permeability
- h_o = height of water above the impermeable layer
- h_w = height of drawdown in well above the impermeable layer
- r_o = distance from well to the boundary of area of influence
- r_w = radius of well casing

Assuming that $h_o = 6$ feet, $h_w = 1$ foot, $K = 4.2$ gpd/ft², and $r_w = 0.17$ foot, the Q's for various areas of influence (r_o) are tabulated in Table T.1. Note that as the distance between wells is decreased, there is a corresponding increase in flow rate. This relationship between well discharge and radius of influence is illustrated graphically on Figure T.1. The figure indicates that in order to obtain a flow (Q) that would be even marginally acceptable for commercial submersible pumps, the wells would need to be spaced less than one foot apart.

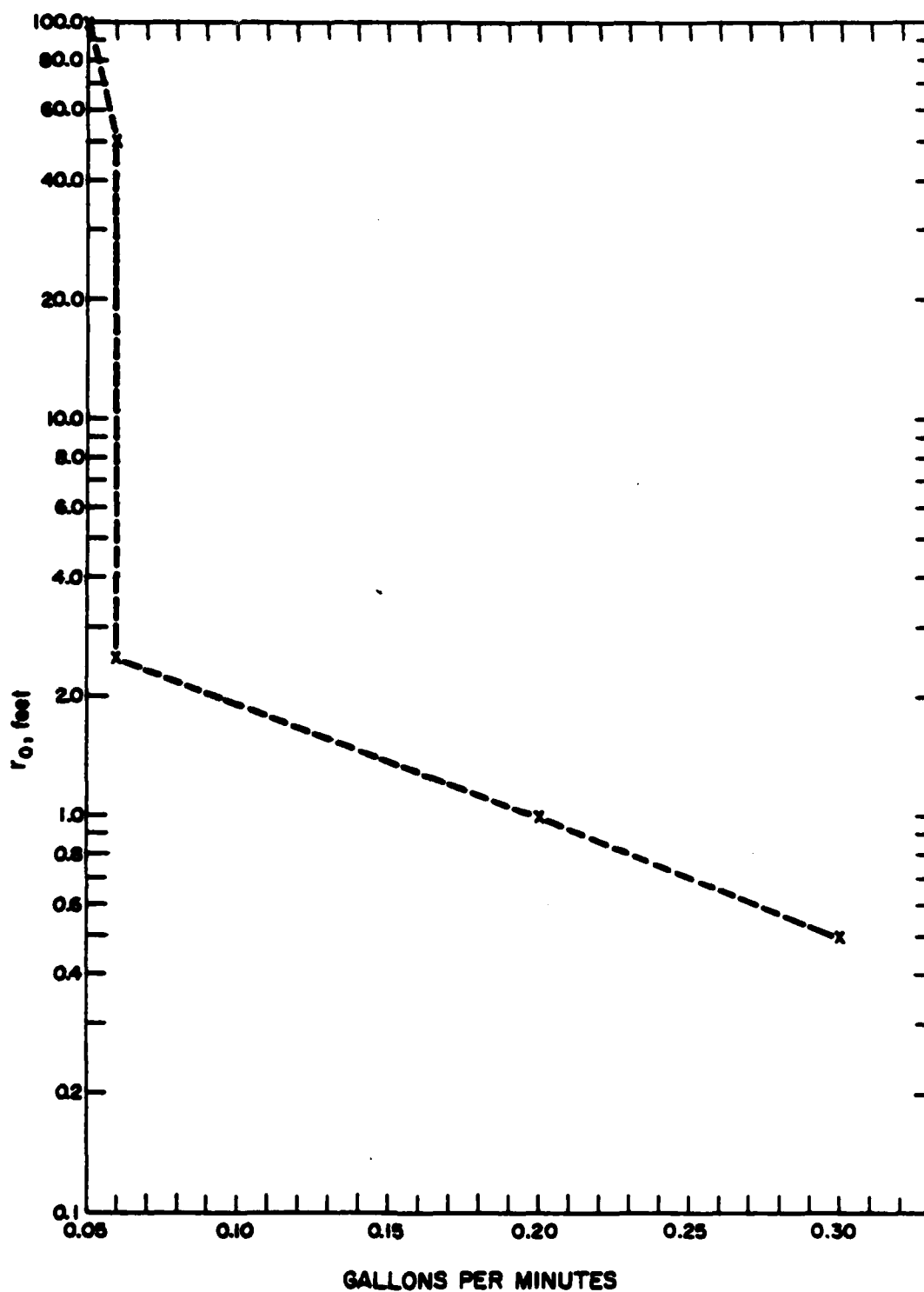
TABLE T.1

EXTRACTION WELL DISCHARGE CALCULATIONS

Radius of Influence, r_o (ft)	Discharge from Well, Q (gpm)
200	0.04
100	0.05
50	0.06
25	0.06
1	0.2
0.5	0.3

FIGURE T-1

DISCHARGE FROM AN EXTRACTION WELL WITH VARIOUS RADIO OF INFLUENCE



APPENDIX U

REFERENCES

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REFERENCES

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APPENDIX V

GLOSSARY

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GLOSSARY

ACTION LEVEL. Constituent concentration above which regulatory investigation is initiated.

ACTIVATED CARBON. Powdered, granular, or pelleted form of amorphous carbon characterized by very large surface area per unit volume because of an enormous number of fine pores.

AEROBIC. Requiring the presence of oxygen.

AIR STRIPPING. Technique for removal of volatile substances from a solution; employs the principles of Henry's Law to transfer volatile pollutants from a solution of high concentration into an air stream of lower concentration.

AIR TEST. Test in which a section of sewer is pressurized internally with air to determine the rate of air loss and the condition of the sewer with respect to water leakage.

ALIPHATIC MATERIAL. Grease and oil.

ALLUVIAL PLAIN. A plain formed by the deposition of detrital materials eroded and transported by a river.

AQUIFER. Water-bearing geologic formations that are both permeable and porous and so yield water readily to wells.

AQUITARD. Water-retarding materials which are so slightly permeable that water scarcely moves through them even under high pressures.

BW. Base production well.

CABLE TOOLS. Bits and other bottom-hole tools and equipment used to drill boreholes by percussive action, using a cable instead of rods to connect the drilling bit with the machine on the surface.

CARBON ADSORPTION. Adhesion of gases, solutes, or liquids in an extremely thin layer of molecules to the surfaces of activated carbon.

CHELATING AGENT. Chemical or complex which causes an ion, usually a metal, to be joined in the same molecule by both ordinary and coordinate valence forces, resulting in the formation of one or more heterocyclic rings in which the metal cation is part of the ring.

CLOSED BASIN. Basin draining to some depression or pond within its area, from which water is usually lost only by evaporation or percolation.

COAGULATION. Separation or precipitation from a dispersed state of suspensoid particles, resulting from prolonged heating, addition of an electrolyte, or from a condensation reaction between solute and solvent.

COMPOSTING. Use of a mixture of decaying organic matter to fertilize and condition the soil.

CONFINED AQUIFER. An aquifer that contains water under pressure. When punctured by a well, the water rises to a level above the aquifer.

cu ft. Cubic foot.

CW. City well.

DISTILLATION. Process of evaporation and condensation used for separating liquids into various fractions according to their boiling points or boiling ranges.

DOHS. California State Department of Health Services.

DOWNGRADIENT. In the direction of the flow of groundwater.

DRAWDOWN. The magnitude of water level change in a well in response to groundwater withdrawal by pumping, or by seasonal variations.

EDTA. Ethylenediaminetetraacetic acid.

EVAPOTRANSPIRATION. Loss of water to the atmosphere by evaporation from lakes, streams, and soil surfaces and by transpiration from plants.

EXCHANGE. Reaction in which two atoms or ions exchange places in two different molecules or in the same molecule.

FIXATION. Treatment process involving reactions between waste and certain chemicals, resulting in solids which encapsulate, immobilize, or otherwise tie up hazardous components in waste so as to minimize leaching and render waste nonhazardous or more suitable for disposal.

FIXATIVE. Fixing agent used to increase the durability of another substance.

FLOCCULATION. Aggregation or coalescence of solids dispersed in a liquid into a flocculant mass.

FLUVIATILE. Environments dominated by river action.

FRENCH DRAIN. Underground passage for water, consisting of loose stones covered with earth.

ft/log cycle of time. Unit of change in drawdown occurring in a well over one log cycle of time, such as from 10 hours to 100 hours after pumping begins (as plotted on a semi-logarithmic scale).

gal/day/ft. Gallons per day per foot.

gal/day/ft². Gallons per day per square foot.

gal/min. Gallons per minute.

GAS SCRUBBING. Removal of gaseous or liquid impurities from a gas stream by the action of a liquid which removes the impurities by dissolving or by chemical combination.

GC/MS. Gas chromatography/mass spectrometry.

gpd/ft. Gallons per day per foot.

gpd/ft². Gallons per day per square foot.

gpm. Gallons per minute.

GRADIENT. The rate of descent or ascent (steepness of slope) of any topographic feature, such as streams or hillsides.

GRAVEL-PACKED WELL. Type of well used in a water-bearing formation containing a large proportion of fine-grained material which permits the passage of water at low velocity. Gravel is introduced around the screen or intake section of the well to increase the specific capacity and to prevent extremely fine material from flowing into the well.

GROUNDWATER DISCHARGE. Discharge of water from the saturation zone directly onto the land surface, into a body of surface water, or into the atmosphere.

GROUNDWATER MOUND. Mound-shaped or ridge-shaped feature of a water table or piezometric surface, usually produced by downward percolation of water to water-bearing deposits.

GROUTING. Applying or injecting a fluid mixture of cement and water, or a mixture of cement, sand, and water, into a grout hole.

HARDFAN. A hard, impervious layer of soil cemented together by insoluble materials.

HARM SYSTEM. Hazard Assessment Rating Methodology.

HEAD. Height of the free surface of fluid above any point in a hydraulic system; a measure of the pressure or force exerted by the fluid.

HYDRAULIC GRADIENT. With regard to an aquifer, the rate of change of pressure head per unit of distance of flow at a given point and in a given direction.

INJECTION WELL. Well to inject gas or water, usually under pressure, into a porous soil or rock aquifer.

INTERBEDDED. Having beds or strata lying between other beds with different characteristics.

IRP. Installation Restoration Program.

LANDFARMING. Application of waste onto land and/or incorporation into the surface soil, including the use of such waste as a fertilizer or soil conditioner.

LEACHATE. Liquid that has percolated through solid waste or other permeable material and has extracted soluble dissolved or suspended materials from it.

LEACHING. Separation or dissolving of soluble or particulate constituents from solid waste or other medium by percolation of water or another leaching agent.

LENS. A geologic deposit that is thick in the middle and converges toward the edges, resembling a convex lens.

LENTICULAR. Having the shape of a lentil or double convex lens.

METAMORPHIC. Consisting of material originating from metamorphic rocks which have undergone mineralogical, structural, and chemical changes in response to extreme changes in temperature and pressure.

µg/kg. Micrograms per kilogram.

µg/l. Micrograms per liter.

µmho. Unit of specific conductance; also called µsiemens.

mg/kg. Milligrams per kilogram.

mg/l. Milligrams per liter.

msl. Mean sea level.

MW. Monitoring well

ND. Not detected.

PCB. Polychlorinated biphenyl.

PERCHED WATER. Water in an aquifer which rests on an aquitard that overlies unsaturated but porous material above the normal water table.

PERCOLATION. Flow of moisture by gravity or hydrostatic pressure through the pore spaces of rock or soil.

PERMEABILITY. Capacity of a porous rock, soil, or sediment for transmitting a fluid without damage to the structure of the medium.

PIEZOMETER. A cased boring installed adjacent to a well for measuring water level responses when the well is pumped.

PLUME. Pathway of chemical constituent flow in underground water systems.

POINT SOURCE. Any discernible, confined, and discrete source from which contaminants are or may be discharged.

PORE SPACE. Open space in rock or granular material, not occupied by solid matter. It may be occupied by air, water, or other gaseous or liquid material.

ppb. Parts per billion.

PRESSURE GROUTING. Placing of grout under pressure in void spaces in or around a structure to strengthen the structure or make it more water tight.

psi (gage). The gage pressure measured by the number of pounds-force exerted on an area of 1 square inch.

PVC. Polyvinyl chloride.

RCRA. Resource Conservation and Recovery Act of 1976.

RECHARGE. The replenishment of water to an aquifer by natural or artificial processes.

RECOVERY. Rise of the water level in a well to its previous level before drawdown occurred.

REPRESENTATIVE SAMPLE. Any sample of material which is statistically equivalent to the total material in composition and in physical and chemical properties.

ROTARY DRILLING. Method of drilling wells in which the drill bit is rotated in the hole. The rock is cut or abraded by knives or hard material set in the bottom of the bit and the waste material is carried away by water or mud forced down the inside of the drill pipe and up on the outside.

ROTARY DRYER. Long steel cylinder, slowly revolving, with its long axis slightly inclined, through which the material to be dried passes from inlet to outlet, tumbling about; moisture is removed by rising hot gases.

ROTARY KILN. Long cylindrical kiln lined with refractory, inclined at a slight angle, and rotated at a slow speed.

RWQCB. California State Regional Water Quality Control Board.

SECURE LANDFILL. Permitted hazardous waste disposal site.

SEDIMENTARY TROUGH. A narrow, elongated topographic depression in which sediments are deposited or trapped by discharging streams.

SLURRY. Free-flowing, pumpable suspension of fine solid material in liquid, resembling thin watery mud.

SPECIFIC CAPACITY (SPECIFIC YIELD). The quantity of water which a unit volume of aquifer, after being saturated, will yield by gravity; a measure of the water available to wells.

SPECIFIC CONDUCTANCE. Conductivity of a solution as measured using a standard 1-cm cell; expressed in μmho ($\mu\text{siemens}$) at 25°C.

STATIGRAPHIC COLUMN. A vertical cross-section of rocks.

STRATUM. In geology, a single bed or layer of rock which is more or less homogeneous.

TCE. Trichloroethylene.

TRANSMISSIBILITY. The rate at which water flows through a foot of aquifer material.

TUFF. Consolidated volcanic ash, composed largely of fragments (less than 4 millimeters) produced directly by volcanic eruption; much of the fragmented material represents finely crushed crystals and rocks.

UNCONFINED AQUIFER. An aquifer containing water under hydrostatic pressure. When punctured by a well, the water will not rise above the initial level.

UPGRADIENT. Directional source of groundwater flow to a given area; in the direction opposite to the flow of groundwater.

VOA. Volatile organic analysis.

VOA BOTTLE. A 25-ml glass vial with a Teflon screw cap used to store volatile organic compounds for analysis.

VOC. Volatile organic compound.

VOID. Pore or open space in rock or granular material, not occupied by solid matter; also called pore space.

VOLATILE. Evaporating readily at normal temperatures and pressures.

WATER LEVEL. Free water surface of a body of water.

WATER TABLE. The boundary between the zone of saturation and the zone of aeration.

WELL CASING. Metal pipe used to line the borehole of a well.

WELL LOG. Chronological record of the soil and rock formations encountered in the operation of installing a well, with either their thickness or the elevation of the top and bottom of each formation given.

WELL POINT. Device consisting of a perforated metal tube or screen attached to a fitting or driving head end, and designed to permit passage of water; used to remove water from the ground.

WELL SCREEN. Special form of slotted or perforated well casing that admits water from an aquifer consisting of unconsolidated granular material while preventing the granular material from entering the well.

